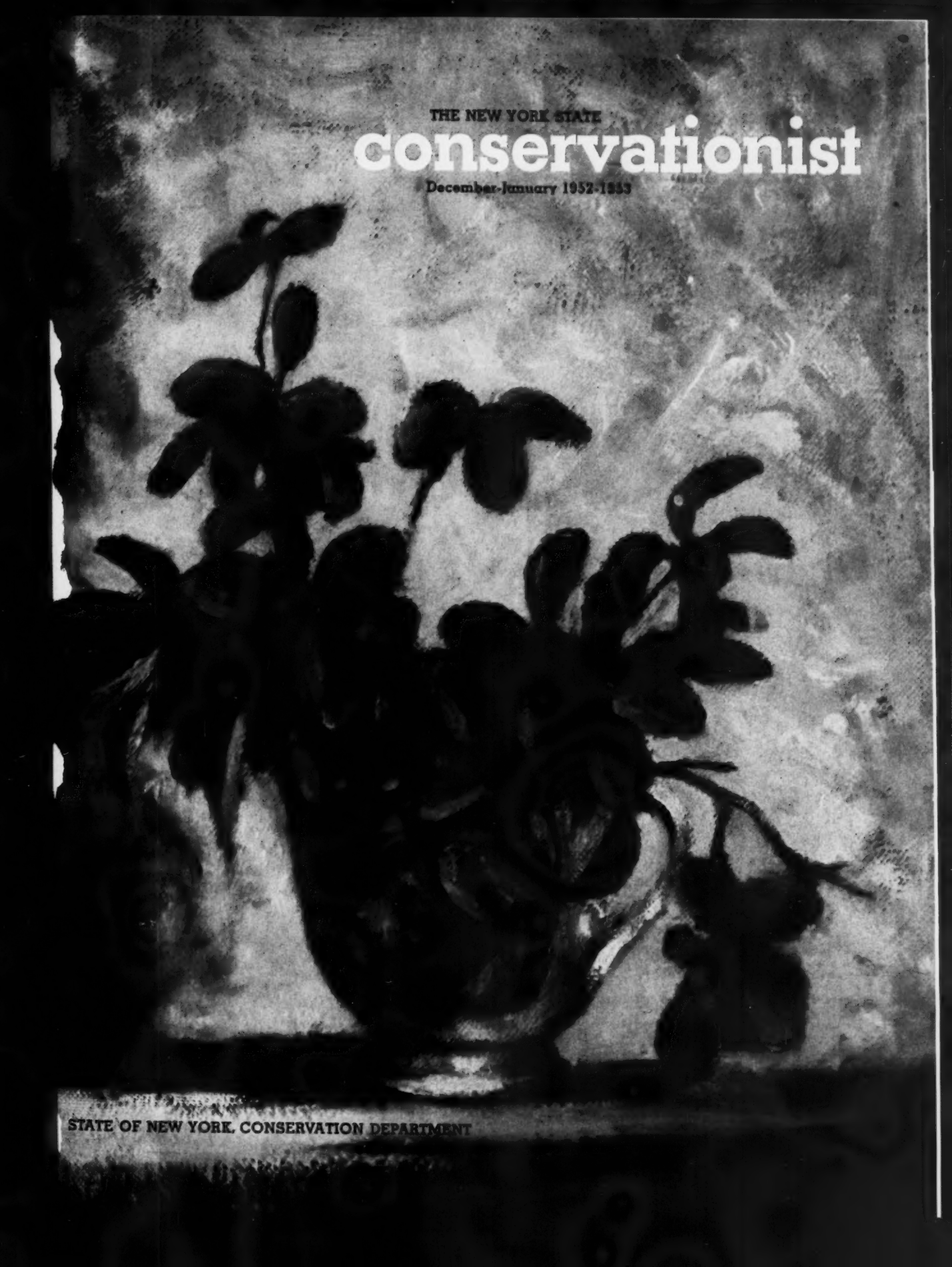


THE NEW YORK STATE

conservationist

December-January 1952-1953

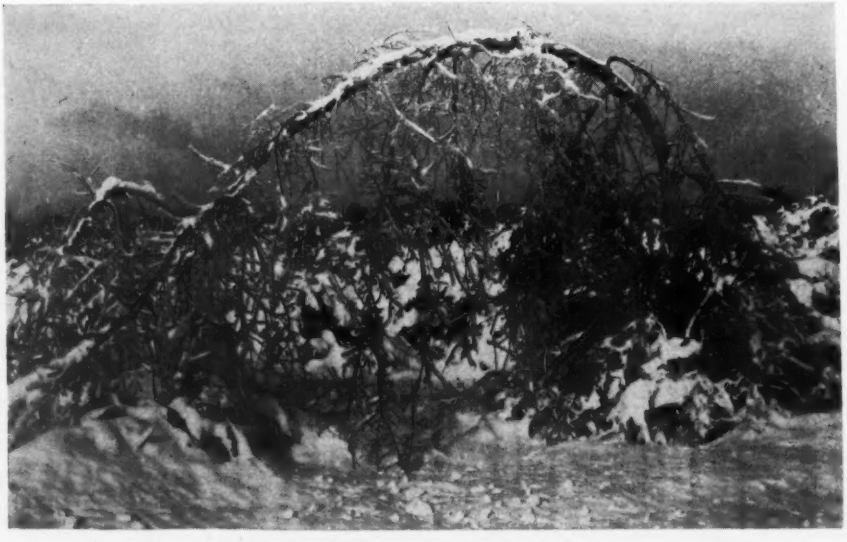
STATE OF NEW YORK, CONSERVATION DEPARTMENT

Christmas Time –

and a note on Christmas trees

Christmas Trees represent a cherished tradition. They are also a business. There was a time when all the Christmas trees came out of the woods, but today more and more are being grown in plantations. The State of New York markets about 30,000 trees a year from its own State Forests (outside the Adirondacks and Catskills) and hundreds of private owners, large and small, get a cash return by producing Christmas trees on land that would otherwise lie idle. Under good forest management, a Christmas tree harvest is used for an early thinning of the plantation, leaving enough trees to stock the area to maturity.

There was a time when all the Christmas Trees we ever saw were spruce or balsam. Those days are gone forever in much of New York—particularly in Buffalo and other western cities—where pines have moved into the market in a big way.



WINTERGREEN

November 21, 1952

Dear Editor:

I have painted you a small picture of the Wintergreen, a plant that has been growing in a blue cup in my painting room and which I thought might suggest winter and Christmas to us dwellers in northern places. And also I thought perhaps you and some of your readers might share my affection for old botany books, and that a few notes from them about this plant might give as much pleasure as they have given me.

You will probably get some letters about my botany on wintergreen. None of the books I have on the subject is less than 50 years old, and so I suppose that at least some of the following facts, all derived from these old books, are by now out of date. But I will give them to you as I found them, and still like them.

To begin with, this familiar (I refuse to use the word "common") plant is a member of the Heath Family ("The Natural History of the State of New York—Albany 1843"—refers to it as the "Heath Tribe"). This is an august tribe. To it belong such splendid plants as the azaleas, the rhododendrons, the laurels, and the less beautiful but ubiquitous alders, and too the more substantial blueberries, huckleberries and cranberries, and finally those less splendid but no less elegant flowers, the shinleaf, pipsissewa, and trailing arbutus.

The wintergreen bears the resounding Latin name of "Gaultheria procumbens." "Gaultheria" is derived from the name of the French naturalist, Hugues Gaulthier, who was Court Physician at Quebec in the middle of the 18th Century. "Procumbens" derives from the Latin verb "procumbere," "to fall forward," "to sink down," "to spread and extend," and doubtless refers to the fact that the plant is a vine clinging close to the earth. "Procumbere" also means to fall prostrate, but I can't see that this has anything to do with it.

Its English names are: Boxberry, checkerberry, and wintergreen. The last, of course, referring to the fact that it is an evergreen, although in the autumn and winter some of the leaves turn dark red. This was true of the plant I brought indoors in October, and it frequently bears fruit and flowers at the same time. It is described as "frequenting wildernesses."

These last facts suggest Christmas in northern places to me. The plant seems willing to be moved indoors, if allowed to cool off at night, and I tried to make the light in the picture approximate the brightness of a sunny window ledge on a winter day with snow outside.

Now then, I have provided you with some apparently useless information. But it seemed to me that the names and description of this simple plant evoke the spirit of those curious and inquiring spirits who roamed the wilderness discovering and classifying plants, and of their successors, those gallant ladies who bog-trotted for rare specimens and wrote books about them. And evoke too their love of the wilderness and nature in all its manifestations. I thought perhaps that to preserve their memory might have something to do with conservation and with Christmas too.

Yours,

Jim

THE NEW YORK STATE
CONSERVATIONIST

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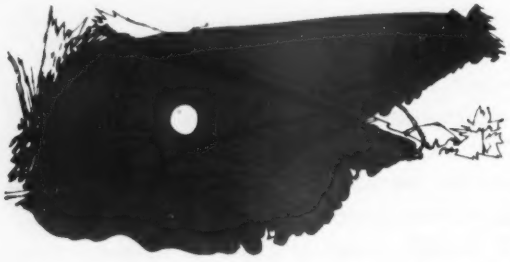
AFTER THE STORM

NOVEMBER 25th of this year marked the second anniversary of the most severe storm that hit the State of New York in all its recorded history. This was the land hurricane which laid waste hundreds of thousands of acres of privately-owned and Forest Preserve lands. The greatest damage was done in the Adirondack region, but the effects of the storm were felt in the Catskills and scattered points throughout the State.

Just as this storm was without precedent in severity, so there was no precedent for handling the consequences of it. Although damage was extensive in other fields (such as to public utilities, farmlands, etc.), the damage as it concerned this Department was measured in terms of downed timber and wrecked facilities. As soon as possible after the storm, the Department conducted surveys of Forest Preserve and private lands in the Adirondacks and Catskills, and as a result of these preliminary surveys it was estimated that the timber on somewhat more than 400,000 acres in the Adirondack region had been seriously affected—from 25 to 100 per cent levelled. In general, Forest Preserve lands were more extensively damaged than private holdings.



In this connection, it should be noted that the full extent of the damage—even after two years of operation and study—is still undetermined. While it is possible to obtain fairly accurate estimates as to the volume of timber up-rooted or killed, it has now become obvious that the storm seriously affected standing trees as well. Many trees which at first appeared undamaged have during the past two years shown signs of weakness, and in certain regions many have been up-rooted by winds of only moderate force. This would seem to indicate that the hurricane of November 25, 1950, in addition to doing great and immediate damage, also had effects which are only now being recognized.

Among the cases in point is that of yellow birch. This species per board foot is one of the most valuable trees in the Adirondacks, and there as elsewhere it reacts unfavorably to any disturbance of its environment. In areas where the softwoods were up-rooted by the storm and a scattering of yellow birch left standing, the yellow birch die-back has now made its appearance. Although this is not yet a serious problem, it certainly could become one.

Furthermore, extensive areas of damaged trees have afforded ideal breeding grounds for such destructive insects as the spruce bark beetle. In other states which have suffered storms similar to ours, the outbreak of this beetle has become noticeable in the third or fourth year following the storm, and it would be unwise if we were not to consider the possibility of a similar outbreak in our own blow-down.

It will be seen, then, that it has not been possible to arrive at a definite solution to even the first problem posed by the storm—an estimate of the extent of the damage; there is no information on which we can base a prediction as to what trees, or how many, will succumb to the "after effects" of the storm, nor is there any way in which we can predict the incidence of disease and forest pests. We must simply wait and see.

Nevertheless, as a result of the storm we were confronted with certain problems that were both immediate and obvious, and our main efforts to date have been directed at solving these. Chief among them, of course, has been the reduction of fire hazard. This effort has been in two parts:

(1) The rehabilitation and expansion of the Department's fire control facilities (mainly telephone lines and fire truck trails) and of the recreational facilities maintained by the Department (including trails, campsites, etc.); $136,000 was made available from Capital Construction Funds for this work. It is gratifying to report that all this work has now been completed.

(2) It was recognized at the outset, however, that the fire hazard created by the storm could not be handled on solely a Departmental level. Obviously the Department was not in a position, with its own forces, to carry out the hazard reduction work on the quarter million acres of State land seriously damaged by the storm. Such work represented an immense logging job. It appeared that in order to handle this problem it would be necessary to call upon our own New York wood-using industries—the only available pool of man power, equipment and know-how organized on a scale large enough to cope with a disaster of this magnitude.

The advice and co-operation of our wood-using industries was sought and received through the medium of an advisory committee* appointed by Commissioner Duryea. As a result of deliberations with this committee, the present system of contract salvage operations was devised and put into operation. Critical areas were surveyed by Department Foresters, these were divided up into "contract projects" and an estimate of the timber contents therein made, projects were then advertised for bid, bids were considered by the Department and accepted or rejected, provisions were made for supervision of operations by Department Foresters—and the salvage and fire hazard reduction campaign was underway.

This campaign has been reported issue by issue in this magazine right from the start. At the present time 164

* Joseph S. Illick, Retired Dean of State College of Forestry, Syracuse; John E. Keib, President, State Forest Practice Board; Lyman A. Beeman, President, Finch, Pruyn and Company; John Burrell, Gould Paper Company; John E. Johnston, contract lumberman, Port Leyden; S. W. Hamilton, West Virginia Paper Company; Frank Ash, President, Oswego Falls Corporation; Frank Wilson, International Paper Company.

projects have been advertised, 133 contracts have been awarded, and on these contracts work has been initiated on 109. At the present writing, there are 31 projects on which no contracts have been let, and 12 of these projects are so inaccessible that we have little hope of receiving bids on them. The following table shows the status of salvage operations as of October 1, 1952.

	Contracts Executed	Contracts Unsold	Total
No. of projects	133	31	164
Acreage	104,566	70,130	174,696
Acreage completed	31,190		
Cords	233,146	240,125	473,271
M.B.F.	28,221.5	11,300	39,521.5
Estimated receipts	$1,018,975.35	$852,443.75	$1,871,419.10

It should be noted that although approximately 75 percent of the timber originally estimated to be saleable on the 139 areas under contract has been removed, a much smaller percentage of the total areas covered by these contracts has actually been cleaned up. This is explained by the fact that the original estimates of downed timber were extremely conservative—a fact having a further significance that will be referred to later. In evaluating progress, however, we must keep in mind that the main objective of our program is the reduction of fire hazard over the entire affected area; by such standards, the job is somewhat less than one-third completed.

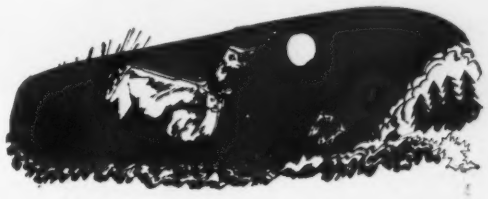
What about the remaining two-thirds? The successful completion of the campaign will depend largely on the willingness and ability of industry to continue its co-operation. This in turn will depend at least to some extent on the demand for forest products, and the ability of our blow-down timber to meet this demand. As to the latter, we may as well face the fact now as later that after 1953 the white pine and hard wood for the most part will be unmerchantable, due to stain and insect damage. Furthermore, the downed balsam has begun to show signs of decay which may render this species unsaleable in the not too distant future. And how much longer the spruce will be merchantable is a question that only time can answer.

With this somewhat ominous forecast in mind, one may well ask why industry can be expected to solve the remaining two-thirds of our problem. As a result of the conservative estimates mentioned above, companies working on the blow-down have already taken out more wood than they anticipated from the projects they contracted for, and so have not only been delayed in completing the work on individual projects, but also have piled up an inventory (wood at the mill) considerably beyond their expectations. Thus, the larger companies have not been willing to undertake new contracts. It is anticipated, however, that by the end of 1953 the majority of the area presently under contract will be cleaned up, and that work will be under way on the 23 areas now under contract but on which no work has yet been initiated.

In the case of the 19 saleable projects still open for bid, the picture is not so bright. The Department is particularly concerned over its inability to negotiate the sale of the downed timber in the Cold River area—unfortunately, one of the areas most extensively hit by the storm, and also one of the areas most highly valued by hikers, fishermen, hunters and others who have justly considered this as the "heartland" of the Adirondacks. The removal of the softwood, and the breaking up of this area by access roads is essential if the fire hazard is to be reduced. But as yet, and in spite of indications that there may be some revival of interest on the part of contractors, we are not in a position to offer much encouragement.

It might be well at this time to comment briefly on some of the anticipated "abuses" that would develop as a result of these salvage operations. Under the terms of the contract, cutting is restricted to downed and seriously damaged trees. A conscientious effort has been made to see that this particular provision of the contract was rigidly enforced. There have been a few violations, but when apprehended the violators have been penalized in accordance with provisions of the Conservation Law. In general, however, operators are to be commended for the manner in which they have done their work; in no case of which we are aware have they condoned the cutting of standing trees by their employees, and violations—(in all cases investigated, attributable to greedy wood-choppers) in view of the magnitude of the entire program have been infinitesimal.

Another aspect of the program about which there was some public apprehension at first had to do with the building of access roads. Such roads are, of course, essential to the success of a program of this nature—you not only have to get to the wood, but you have to get the wood out. Some of those who have criticized the inevitable road building program do not appear to realize just what is involved in planning and building access roads in an area of heavy blow-down. Contractors and project foresters, however, have endeavored to keep road construction to a minimum, and the Department has assumed responsibility for seeing that all roads constructed during operations are barred to public use once the project has been completed. But the Department has also recognized the value of some of these access roads for fire lines and transportation of fire fighting equipment, and intends to keep certain key roads available as long as necessary for such purposes; they may mean the difference between a minor fire and a major catastrophe in years to come. Other roads will be allowed to "go back to nature."



Because this program is so large and involves so many individual projects and contractors, the Department is proud that the work has proceeded as smoothly as it has to date. Two legislative committees and several groups of conservationists have inspected a number of the salvage jobs, and we are gratified that they have given the work of the supervising foresters a vote of confidence as to the judgment they have used and the degree of compliance they have secured from contractors. In a program of this magnitude, there are always minor things which one can criticize and in so doing, raise objections and foster doubts which may have the harmful effect of undermining the confidence of some who have not had an opportunity to judge for themselves. We are glad to report that such short-sighted criticisms have been few and far between.

There remains the problem of finishing up the work, and as this report attempts to show, a great deal remains to be done. The Department has no alternative but to rely on the continued co-operation (even patriotism) of the only organizations capable of doing the actual work—the wood-using industries of New York State.—WILLIAM M. FOSS,
Director, Lands and Forests

Locked forever—the end of a fight

The Life and Times of a Taxidermist

by George H. Lesser

IF you want to see what's happened during the hunting season, visit a taxidermist's shop after the season closes. There you will see the realized hopes of outdoor men from all walks of life. Trophies from "men of distinction", hunters of modest means, and boys with little money to spare. You will see deer antlers of a size you never thought existed, ordinary heads and small ones. All collected after a hard season's hunting and (according to the stories of the owners) only after extreme difficulty, more than the usual amount of hard luck, and (by inference) more than the usual amount of skill. You will also see bear skins, deer hides, foxes, wildcats, pretty pheasants and ducks, grey squirrels from the squirrel hunters, and grouse from the bird hunters. If the taxidermist is a large operator you will look at moose, elk and caribou antlers, and perhaps a big bear skin from Kodiak or something else really impressive from the West and Canada.

You don't have to look at the trophies exclusively; you might look at the taxidermist himself—who will obviously be in tough shape as a result of the rush of business which comes to him in the few short weeks of the hunting season. He is also exhausted from answering questions and from patient listening to the hunting stories of his patrons, for which he must make polite and liberal allowance for exaggeration, (an essential ingredient for a good hunting or fishing yarn).

The role of the taxidermist has little to do with the economy of the country. No use in pretending about this. But the taxidermist does take his part in that vast enterprise which runs into millions of men and dollars—the big business of hunting and fishing. Furthermore, he is in closer contact with game and its pursuer than any other professional. He must know both the hunters and the hunted.

Most of us got into this unique business by accident. My first start was back in 1909 when I read Theodore Roosevelt's account of his travels in Africa. He was collecting specimens for the National Museum in Washington. His book *African Game Trails* (first published in Scribner's Magazine) held me fascinated, and I spent a quarter each month buying the magazine to follow the story. Every boy has his hero, and he became mine. I never got to be President, but I wound up doing nearly as much hunting as T. R. did, and I wound up being a professional taxidermist. That has paid off in satisfaction at least: This past year I received the Roosevelt Memorial Award for a record woodland caribou that I got in Newfoundland. This presentation was made to me by Archibald Roosevelt at the Boone and Crockett Club dinner held in the American Museum in New York. So, while I never got rich at it, the taxidermist business enabled me to tramp the various big game fields of North America and it has acquainted me with many good sportsmen whom I like to call my friends.

There are not many taxidermists. In New York State there are only 148 licensed. The major portion of these do work for friends as a sideline occupation. Few young men are really learning the trade, even though many a kid sends away for a correspondence course. But usually, the kid does not follow through, and here is what happens: After the kid gets the course and an abundance of supplies, somebody gives him a deer head for his first specimen. Primed with enthusiasm, but without a good place to work, he sets up shop in a gloomy cellar or chilly garage, then faithfully follows the directions. After making a hermit of himself for a dozen evenings our

student finds his deer head near completion (you can tell it's a deer by the antlers). His next step, which is a mistake, is to invite a couple of friends to have a look at the masterpiece. With belly laughs and much criticism the friends quickly dispose of the enthusiasm of our novice and of course he becomes discouraged. After a few more attempts on perhaps a crow or an owl he decides that a more normal occupation would be desirable. The situation winds up when the products of his artistry are consigned to the city dump, and then his folks are happy again.

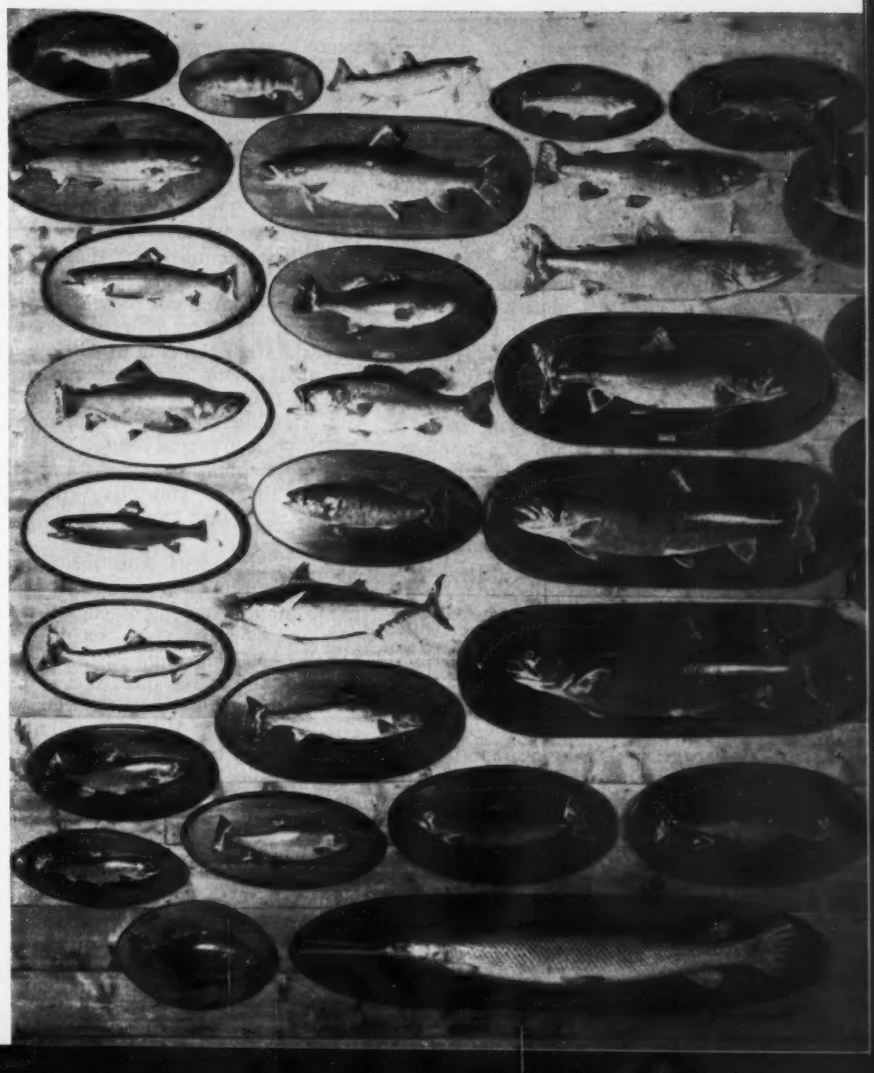
Once in a while one of these boys with an unlimited amount of patience and considerable artistic ability will stick to it in spite of his critics, and make good. I just wish there were more of this kind, because the biggest problem in the business today is to secure assistants with the necessary qualifications—chiefly patience, genuine interest, and a knowledge of Nature.

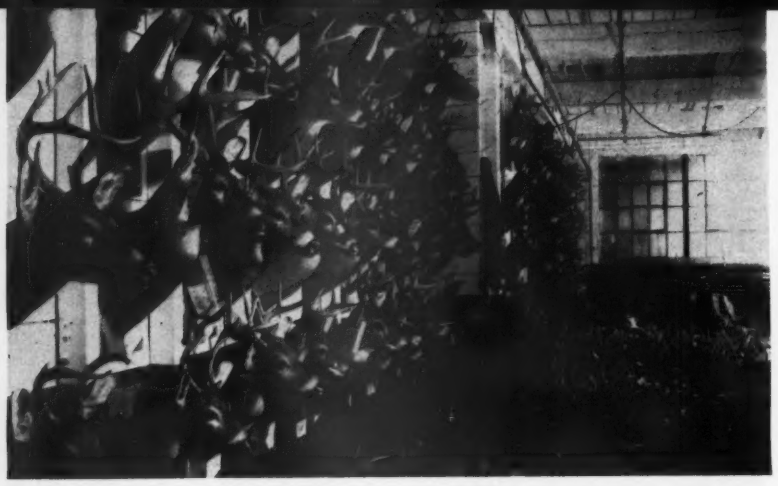
The two most popular trophies in our State are deer heads and deer skins. If it were not for deer, we taxidermists would fold up. Of course not all the good heads are mounted, but enough of them are saved to keep us busy, and then most of the young hunters have their first deer head mounted whether it's big or little. In recent years nearly all of the deer skins are saved—they should be—they make the finest gloves.

The most deer heads I ever handled in one season was in 1928, when 700 were received for mounting. That same season brought in 44 bear skins for rugs. The bear business is not so good now, because each year we receive fewer than the year previous, but from my own experience, the desire to have deer heads mounted remains as strong as ever.

Beside the demand for the usual in the various game and fish species to be mounted, there is often a request for the unusual—the reasons why are known only to the patron. For example: A squirrel hunter wanted an extra tail put on his squirrel so he could have a specimen with two tails, just to upset his friends. A prominent Albany doctor had us mount his moose head with a light bulb inside the head to light up the eyes when he turned a switch. Another man had a whole family of skunks mounted. Another nimrod, using slugs, shot the tail off a bounding buck and had us fix up the tail on a plaque. Here is the best one: An optimist sent in one deer skin and wanted twelve pairs of gloves made, half of them colored brown and the other half grey. Impossible! About four pairs is the limit for one skin—and who could put two colors on one

You name it; we've probably got it





hide? Several sets of deer heads with "locked" antlers have been received. Lately, specimens of our Adirondack wolves have shown up. The rarest animal I've handled was a panda from Tibet, mounted for a fur company.

There is one party who has to be taken into consideration when a man takes up the sport of hunting and then insists on having trophies mounted, and that is the "little woman." Some of the wives object strenuously when the "old man" picks up the gun and takes to the woods, leaving them (as they put it) "sitting home alone." Of course if hubby is successful and brings home a smashing big buck it's a different matter; she is then proud to think that she married an expert "hunting pappy." But she is likely to object if he brings more than one mounted trophy into the house. She will usually permit one, but when the collection begins to grow her remark is "Where you going to put it?" and then the trouble starts. This trouble can be overcome by what is known as the reciprocal trade treaty, which means that "Pop" can buy her a new fur coat or a trip to the sunny South or a new convertible, in exchange for an unlimited hunting license. With any such treaty signed, there will be no more complaints about "Pop's" running around the woods with a gun, and he can have as many examples of the art of taxidermy hung in his den as he chooses to collect, with no questions asked. We taxidermists would like to see more of such treaties.

A number of interested sportsmen who can afford it have buildings erected for the special purpose of housing their large collections. Mr. A. C. Gilbert, the well known toy manufacturer of New Haven, Conn. has a fine building of this type, filled with a wide assortment. And Mr. J. Watson Webb and his family have an immense room with high ceilings at Nehasane, N. Y., crowded with a magnificent display of all American game. Another is the collection of Mr. Frederick Potter at Brandreth, N. Y.; housed in what is called Trophy Lodge, it is a hunter's dream come true. But most hunters are content to "fix up" what they call a den, which is a word for the place where you can find them most of the time.

Of course, the finest work in taxidermy is to be found in the big museums of our country, where no time or money is spared in presenting specimens of natural history in natural settings under glass. The American Museum of Natural History, located at 81st Street and Central Park West in New York City, is one of the best in the world. There is a thrill here for any person who loves animals (as almost all taxidermists do) especially if you have some kids along, for they will enjoy it too. And our New York State Museum, situated on the top floor of the Education Building in Albany, has mounted and on display all species of wildlife found in our State. Whether you are interested in taxidermy or merely want to expose yourself to plenty of information, you will find the material there for your observation and study—at no cost to you.

MY lifetime spent with the hunters and hunted has been one of extreme interest and never ending fascination. I have no regrets, excepting that I wish I had some enthusiastic disciples following me in the profession of taxidermy who could take over when my eyes grow dim. When I am finally called to the Happy Hunting Ground the first thing I am going to do is look up such men as Selous, Akeley, Hornaday, Boone, Crockett, and the many fine guides I have had in the big game fields of North America. And last but best of all, my boyhood hero, Theodore Roosevelt.

some

By Dr. G. L. Rohdenburg

WHILE the beach plum, which is native to the North Atlantic seaboard from Cape Cod to the Virginia Capes, is best known for the jelly and jam made from its fruit, it also has other commendable attributes. It is extremely hardy and once established resists prolonged drought, sub-zero cold and most parasitic diseases. In its native state it may occur standing singly as a bush, or growing in close company as a tree. Of somewhat angular architecture, with suitable pruning it can be made to simulate some of the bizarre forms of the Japanese dwarf trees. The bush form can be converted into the tree type by pruning, and the tree form can be converted into the bush by cutting off all growth above the ground and not pruning the secondary growth which follows. The fruit when ripe may be either red, yellow, or bluish purple. In spring when the dogwood blooms each branch is tightly covered with white flowers.

In our experience root cutting has been the most successful method of propagation. Cuttings are best made in the early fall. A bush is selected and the larger roots, of which there are several, are exposed to the point where

notes on the beach plum

the root diameter is approximately that of a lead pencil. A trench is prepared which is about a foot wide and long enough to take the number of root cuttings to be prepared. The trench should be 18-24 inches deep and should contain 6-8 inches of humus. The exposed root system is cut into sections 6-8 inches in length, with care being taken to make clean cuts. The sections are placed in the trench, on the humus, and so arranged that the long axis of the cutting is parallel to the short diameter of the trench. The trench is then filled with a mixture of soil and humus, water being added during the filling and gentle tamping packing the fill. Finally, the trench is covered for a depth of about 6 inches with a mulch of oak leaves or pine needles. The overlying mulch should be kept moist for several weeks. In the spring each root section with its established growth is removed and planted in the selected spot. The planting is undertaken in the same manner as the preparation of the trench. For the first two or three weeks it is essential that the new plant receive sufficient water. The main difficulty is in getting the new plant established, but once established (barring the use of chemical agents) beach plums are very hard to kill other than by complete removal of the roots. We have established plants in the manner indicated within 30 feet of the point of maximum high-tide, on a sand dune, and about 1,000 feet back from the water in a woodlot.

The beach plum is apparently a primitive plant and like other primitive forms of life possesses latent powers. It is believed by some that the apple, pear, peach and some other fruits have their origin from the plum. With this idea in mind the writer some 20 years ago commenced to graft on the beach plum scions from some common fruit trees.

Originally specimens which had been pruned to tree form were used in this experiment, but more recently the bush form has also been employed. In one instance a multiple graft was made 10 years ago—apricot on one branch, German prune on a second, and (as control) beach plum on a third. The tree was kept within the limits of 8 feet by fall pruning of excessive growth. During the past summer we gathered over 80 prunes, 6 apricots (during flowering of this scion there were heavy rain storms) and approximately a quart of beach plums.

It is a sort of folklore that a seed tree cannot be grafted on a pit bearer—an apple on a plum, for example. This in our experience is not true. We have made five double grafts on tree type beach plum, placing an apple on one side of the branch and a plum on the opposite side of the same branch. Three times the apple graft took, the plum failing; once the plum took and the apple failed; and once neither took. The growth of the successful grafts in this series was startling, a 6-inch scion reaching a length of nearly 4 feet in one season. Grafts on the bush form need support when in fruit.

It is a novel horticultural experience to have a bush with four different kinds of fruit on it. But it is not necessary to graft the beach plum to enjoy and profit from it. For those who live near the sea where nothing but beach pea and sedge grass are supposed to grow, the beach plum offers a pleasant surprise. Tree or bush, it is (or can be made to be) very attractive, especially in the spring; it offers the opportunity for a more or less profitable harvest in the fall; and it serves as an anchor for a type of soil which has the tendency to shift with every wind.

our study of

THE FOREST PRESERVE

by **Wheeler Milmoe**, *Chairman, Joint Legislative Committee on Natural Resources*

I am very happy to comply with the request of the Editor of THE CONSERVATIONIST in providing for its readers a progress report on the study of the State Forest Preserve undertaken several months ago by a special advisory committee. I am particularly happy to do this because as we all know, the discussion of the Forest Preserve which resulted in the formation of the committee was initiated in this magazine.

It may be helpful to consider first the origin, purposes and relationships of this recently created committee. In 1951 the State Legislature created a Joint Legislative Committee on Natural Resources. During the 1952 legislative session, a resolution was unanimously adopted continuing this committee "with all powers and duties heretofore assigned." Among the powers given to the Chairman of this committee is "the authority to appoint such subcommittees as the Committee shall deem necessary, and to designate as advisory members such persons as may be helpful in the work of such subcommittees."

Within these legislative provisions a Special Advisory Committee on the State Forest Preserve was named early in May, 1952 for the purpose of aiding the Committee on Natural Resources in studying and reporting on this important field of State activity. In planning the personnel make-up of this 18-member advisory committee, special efforts were put forth to find persons definitely interested in the forest resources of the State, highly qualified to consider the problems relating thereto, and capable of contributing helpfully to the working out of recommendations that will be in the best interests of all the people of the State.

I am happy to report that in naming this committee, special consideration was given to the all-important factor that its membership be truly representative of all interests and organizations concerned with the forest and other closely related natural resources of the State. A State-wide search was instituted for persons with outstanding competence and sustained interests in these fields, and after receiving numerous recommendations and counselling with leaders in all phases of conservation, the following Special Advisory Committee on the Forest Preserve was named:

Frank C. Ash, trustee, State University College of Forestry, Fulton; Lyman Beeman, president, Finch, Pruyn & Co., Glens Falls; David H. Beetle, Gannett newspapers, Clinton; Karl Blanchard, garage proprietor, Ticonderoga; Arthur Flick, hotel proprietor, Westkill; Edward S. Foster, secretary, State Agricultural Conference Board, Ithaca; Karl T. Frederick, attorney and conservationist, New York City; Harold L. Keller, State Commissioner of Commerce, Albany; A. Augustus Low, president, Empire State Forest Products Association, Sabattis; Charles B. McCabe, publisher, Daily Mirror, New York City; John P. Myers, Chancellor, State Board of Regents, Plattsburg; Lithgow Osborne, former State Conservation Commissioner, Auburn; Julian J. Reiss, business executive, Lake Placid; Paul Schaefer, Friends of the Forest Preserve, Inc., Schenectady; Mrs. Walter Slifer, Garden Club leader, Rochester; Prof. Gustav A. Swanson, Cornell University; Donald M. Tobey, president, New York State Conservation Council, Victor; Edward F. N. Uthe, Executive Secretary, State Association of Towns, Albany.

The committee has been particularly fortunate in securing the services of Dr. Joseph S. Illick, former Dean of the State College of Forestry at Syracuse University, to act as consultant on our Forest Preserve Survey, and to assist in directing our studies.

Thus far three meetings of this advisory committee have been held—two one-day meetings in Albany, and one two-day meeting at Saranac Lake. The latter meeting included a full-day field trip, during which a wide range of Forest Preserve conditions and practices were observed and discussed under the able direction of the local District Forester. The fourth meeting of the committee is scheduled to be held in Albany on December 4, 1952.

At the first meeting of the advisory committee held in Albany on May 26, 1952, a simple over-all plan of procedure was approved. This plan calls for the following general sequence of considerations:

1. The bringing together and interpretation of significant basic information regarding the State Forest Preserve. Much of the information has been assembled and considered by the committee during the three meetings held to date.

2. Determination of important Forest Preserve problems that deserve special consideration. A good start has been made in listing these problems and preliminary consideration has been given to some of them.

3. A review of what other state and federal agencies are doing with similar forest problems. Much valuable data along these lines has already been secured for presentation to the committee for consideration and discussion at forthcoming meetings. It is planned to have representatives of these other forest agencies appear in person before the committee to submit special reports on their experiences and operational policies.

4. Formulation of conclusions and recommendations. I am sure everyone will understand that, in view of the vastness of our field of study the committee has not progressed far enough to have come to any definite conclusions as yet. Therefore, our survey group is not ready to make any specific recommendations at this time.

While it is required by law that the Committee on Natural Resources make a report to the next session of the Leg-

islature, my current opinion is that the best that can be done on our State Forest Preserve Survey will be to report commendable progress and express the hope that the studies now under way may be continued to their proper conclusion. It is our hope that they will have progressed far enough for us to have helpful determinations and recommendations for consideration by the State Legislature of 1954.

As Chairman of the Joint Legislative Committee on Natural Resources and the Special Advisory Committee on the State Forest Preserve, I am truly gratified with the progress that has been made during the past several months. I have a strong and growing confidence that much good will come to the people of New York State through the deliberations and eventual evaluations and recommendations of these two important interlocking committees.

IN closing, I would like to add this comment: As we all know, our Forest Preserve has been and continues to be the subject of widely divergent opinions and emotions, and I believe that all shades of thinking and feeling are represented in the composition of our committee. Nevertheless (and I believe that all of the members would agree), the meetings of the committee to date have been characterized by the greatest possible friendliness, tolerance and mutual respect. I think this augurs well for the eventual success of our work.

INDIAN LAKE

(Dutchess County)

LOCATION:

On New York-Connecticut state line between Millerton, N. Y., and Sharon, Conn. in the northeast corner of Dutchess County.

PHYSICAL FEATURES:

Area—200 acres.
Elevation—600 ft.
Maximum Depth—14 ft.

CHEMICAL CHARACTERISTICS:

Water—warm (pickerel, largemouth bass type).
pH—slightly alkaline.
Oxygen—good.
Plant life—aquatic weeds are rapidly taking over this lake. Swimming, fishing and boating are difficult in many areas of the lake.

FISH:

Fourteen species of fish have been recorded in Indian Lake. Anglers may catch largemouth bass, chain pickerel, yellow perch, common bullhead, sunfish and an occasional crappie or smallmouth bass.

GENERAL:

No boat liveries.
Not posted.
Surrounded by summer camps.

FISHING REGULATIONS FOR INDIAN LAKE:

Seasons:

Largemouth bass—July 1-November 30.
Smallmouth bass—July 1-November 30.
Chain pickerel—May 1-March 31.
Other species—No closed season.

Size Limits:

Largemouth bass—12 inches.
Smallmouth bass—12 inches.
Chain pickerel—14 inches.
Other species—No limit.

Daily Limits:

Largemouth bass—6 per day.
Smallmouth bass—6 per day.
Chain pickerel—6 per day.
Other species—No limit.

TIP-UP REGULATIONS ON INDIAN LAKE:

1. *Six (6) tip-ups are allowed per angler.*
2. *Tip-ups may be used at any hour during the day or night.*
3. *The name and address of the angler must be on each tip-up.*

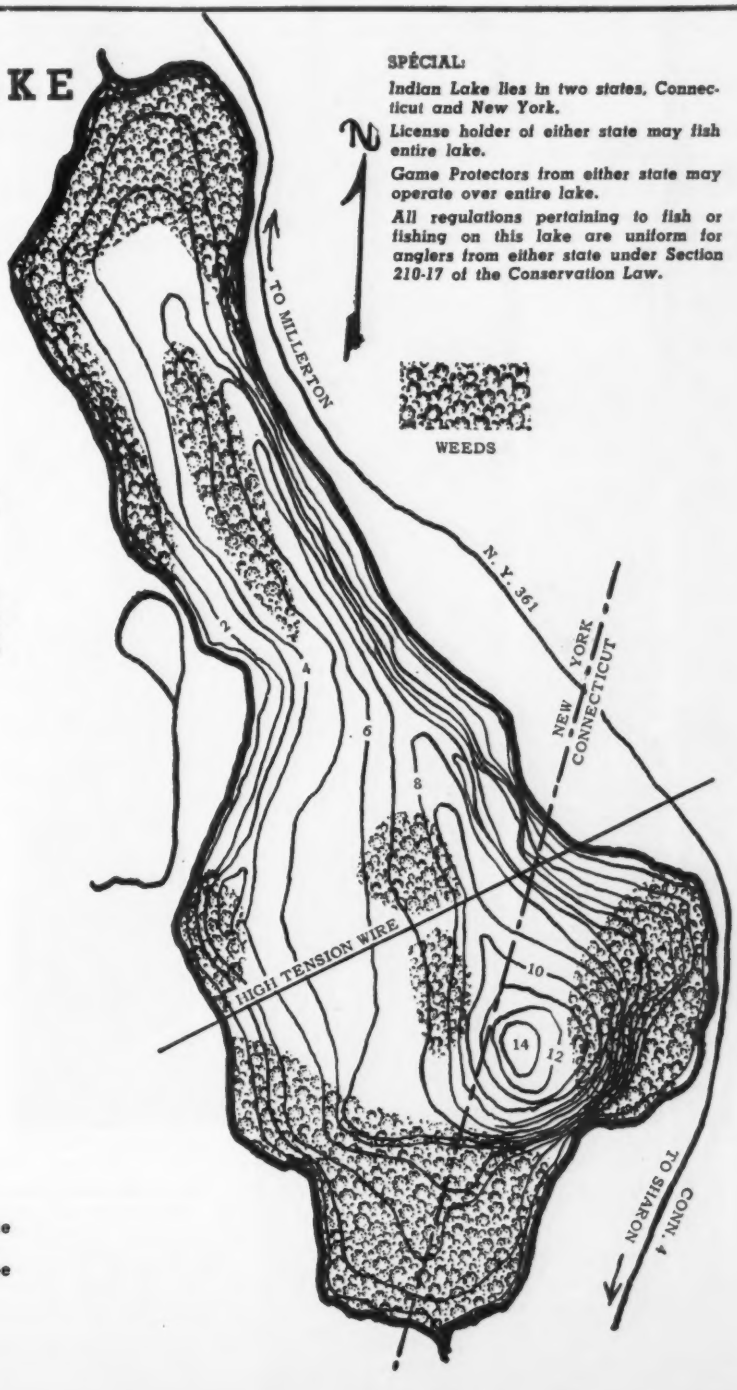
SPECIAL:

Indian Lake lies in two states, Connecticut and New York.

License holder of either state may fish entire lake.

Game Protectors from either state may operate over entire lake.

All regulations pertaining to fish or fishing on this lake are uniform for anglers from either state under Section 210-17 of the Conservation Law.



Chemi-peeling

Left, soft maple after 26 mos.; top, beech after 14 mos.; bottom, rough, old hard maple 2 mos. after being given the chemical-peeling treatment

THE use of chemicals to loosen the bark from standing trees is a relatively recent development. The old process was to fell the trees and peel the bark off by hand, a laborious and often messy job that nobody ever did willingly. This sap-peeling had the added disadvantages of requiring a lot of labor during a relatively short season —June into August—and of coming at the hottest and buggiest time of the year, when woods work was really rough.

Poisoning trees just to kill them is nothing new. As long ago as 1931, at Cornell, Nelson Spaeth and the late Josh Cope perfected a system for injecting sodium arsenite into trees with a special tool. For good reasons, neither they nor anyone else appreciated its possibilities for making peeled wood. In the middle 1940's an effective but rather cumbersome system for peeling spruce was developed in Canada. But it remained for the Armstrong Forest Company of Johnsonburg, Pa. to pull all the ends together and to perfect a commercially workable technique for debarking trees. Great credit is due this company for making their experience and patent available for public use.

In New York, a few trials of the Armstrong system were made in the spring of 1950, a lot more in 1951. While we don't know all the answers yet, we *do* know enough to do a workmanlike, commercially practical job.

The equipment and materials are simple and easily come by. A single-bitted axe, or on small trees a Scout hatchet, a 12–16-inch spud made from a buggy spring or a tire iron, a gallon pail with a bail on it (a paint can is good) and a 2 or 3-inch paint brush (preferably with synthetic bristles) are all the tools needed. The man applying the poison would do well to wear rubber gloves or to use a skin-protecting coating on hands and forearms, such as "Pro-tek" (DuPont). The poison is sodium arsenite and is best bought as a concentrated liquid. (One company sells it under the trade name of "Atlas A".) This stock solution can be diluted about half, to give a strength equivalent to between two and three

pounds of dry sodium arsenite per gallon. Be sure that every container which is used in this work is boldly labeled *POISON*, for arsenic is something to be handled with due respect. And always have available both the material and knowledge for emergency treatment of arsenic poisoning—just in case. In order to be able to tell which trees have been poisoned, it is well to put dye in the solution—either red, blue or black. A package of dime-store dye per gallon will do, but two packages are better. Or use common laundry blueing.

Basically, the operation is quite simple. In the spring and early summer (June to mid-August) when the trees are growing rapidly and peeling is easy, a girdle of bark about 4 inches wide is removed from the trunk as low down as practical and injuring the underlying wood as little as possible. It is best to bump the bark off with the back of a single-bitted axe. If the edge is used, great care must be exercised not to cut into the wood (for reasons that will be explained later). On trees with a cross-wise fiber in the bark (like the birches) the bark can be split lengthwise with one or two axe strokes, then split off with a spud. It is essential that the bark be completely removed all the way around and that ingrown seams be carefully chopped out. The freshly exposed wood is then *thoroughly* painted with the arsenite solution, special care being taken to soak the *upper* edge. And that's that; from then on all you have to do is wait.

The sodium arsenite solution soaks in so quickly and there is so little spillage that the chances of poisoning wildlife are very remote.

The outer layers of wood are the ones that carry most of the water supply from the roots to the leaves. The arsenic soaks into these cells and is quickly carried up the tree trunk and out to the twigs and leaves. But if these outer tubes have been severed, as by a too-heavy clip with the axe, no poison will draw up and there will be a streak of unpoisoned wood that will stay alive and to which the bark will stick. Very annoying.

After the poison has been applied, the exact course of events depends on whether the work was done early or late in the season, on the strength of the solution, and on the species of tree treated.

With the strong solution applied early, most species will have withered or strongly colored leaves or needles within a month after treatment. Foliage dies from the top down and from the outside of the crown inward. With a relatively weak (one pound) solution applied late, "autumn will come early," but there will be no conspicuous withering of foliage. Arsenite applied in spring and early summer will kill that part of the tree above the girdle but not below it; that's the reason for doing the work down low.

During the winter, freezing and thawing cause the bark to separate from the wood neatly and cleanly. When spring comes, the dead bark dries out and begins to crack up. Generally, it is pretty thoroughly loose by the middle of summer, 13-14 months after treatment. From some species the bark will actually fall off, while with others it loosens and can be pried off with little effort. Only with the birches does the bark hang together persistently.

Here's how it works, by species:

Red Pine: The bark peels only fairly well the first summer but comes off beautifully the next spring. As the Pine Sawyer (a wood-boring beetle) will attack treated trees that still have the bark on, any material that is to be salvaged must be peeled before mid-June. Also, there is an indication that chemi-peeled red pine tends to develop fewer and smaller checks than does sap-peeled wood. The latter often opens up a single big, deep split going in to the heart. This finer checking should make a better-looking and stronger treated post. (White pine responds the same as Red.)

Spruce: Plantation spruce treats O. K. Experience with wild red spruce is not far enough along yet for a firm guess, but there is no apparent reason why it shouldn't work the same way. No bug problem with spruce. Hemlock and White Cedar work O.K., too.

Birch: We have seen results on yellow, paper, grey, and black. It takes a strong, thorough treatment to kill any of these and many will leaf out the next year. No matter what the pattern of death, the cross-wise bark fiber prevents it from falling, so that it *looks* as though the treatment had been unsuccessful. However, death of the cambium from arsenite apparently does cause a separation of bark from wood. It is expected that the drum barkers will knock it off at the mill.

Beech: This is our $64 discovery, for this species is impractical to sap-peel, and we have lots of it that will never make anything better than pulpwood. Beech girdles very well by bumping. One year after treatment, much bark will have fallen and the rest will be so completely loosened that it will come off with the least disturbance. Ingrown seams will cause trouble; they should be very carefully worked to insure a complete girdle. Jim Kennedy's 1951 work in District 3 surely demonstrated how to treat beech.

Hard Maple: Operates like beech. Where a too-heavy axe stroke makes a nick in the wood, especially at the top of the girdle, a live streak will remain, running far up the trunk and sometimes all the way to the crown. Bumping off the girdle will be safer. We have one recent and interesting experience with this species. On June 28th last, a wolfy fence line was treated; two months later the bark was loose and was pried off the lower 8 feet with a light spud. Yet the crown was all green, and showed little signs even of yellowing.

Red Maple: Treats well, with the same live-streak problem that hard maple has. After 13-16 months much of the bark will *fall off* if a good kill is achieved.

Other Species: There has been some question whether basswood would respond, but 1952 observations in District 3 indicate a good peel 13 months after treatment. Because of its ribbing, the bark hangs together in long sheets. Black cherry treats easily, and is among the first to show wilting and death of the foliage. Bark loosens well, but does not come off readily until the second summer and does not fall even then. Elm, with its ribbed bark, comes off perfectly and in big sheets.

Except for the birches, which are a little difficult, every species that has been fairly tested has shown promising results. The work goes fast and the costs will be economically reasonable. On pulpwood, it looks like a $2 saving over sap-peeling. But the really big asset of chemi-peeling is that the treatment can be quickly applied during a relatively short season in spring and early summer, and the rest of the operation (after a suitable waiting period) at any time that is convenient. And patience is certainly cheaper than labor.

If no salvage is contemplated, arsenite will give a prompt and positive kill of the above-girdle parts, a technique that may be useful in cleaning and thinning plantations.

If you are within trucking distance of a pulpmill that buys peeled hardwood, here's a bright, new technique. Perhaps you'll want to plan a small-scale test for the spring of 1953. But if you figure to do this on a commercial basis, be sure your wood is sold—for 1954 delivery—before you bump the first tree; there is a year's wait between treatment and harvest.—Dave Cook

opinion

The Editor Views The News

A Paper for the 50th Anniversary Meeting of the Society of American Foresters

Following is the text of an address given by P. W. Fosburgh, the editor of this magazine, at the Golden Anniversary meeting of the Society of American Foresters, held in Washington last year. He was requested to speak on this subject: The Editor Views the News. Some of those who heard him suggested that his talk be printed here. So we obtained his file copy and read it. The address, precisely as he gave it, appears below not merely because it was requested but because (1) we think you will be interested in the kind of shop talk that goes on in the conservation profession; (2) it gives some idea of the editorial philosophy behind this publication; (3) it frankly discusses why conservation has had a relatively poor press, and (4) it suggests why the Voice of America has said it could use in Central Europe a million copies of this magazine.—C.B.S.

PEOPLE in the field of public relations (and of course that includes editors) are essentially salesmen. We may not be asking a price, but we are offering a product to the public.

A good salesman knows, first of all, just what it is he's trying to sell. The way he sells it, his approach to the public, is based on a thorough knowledge of the commodity or idea he has to offer. If he doesn't know what he's got, how can he point out the attractive features of his product or show why the public needs it; or if the public doesn't need it, then why the public at least ought to be interested. And people in the selling business tell me that knowledge of the product makes a big difference in other ways: What kind of market to try to reach with it, and what kind of package to wrap it up in.

We who are trying to sell conservation to the public are confronted by a serious problem at the outset—there still seems to be no general agreement, even among us, as to just what it is we're trying to sell. We don't agree on what it is, on how big it is, on who really needs it or who could do without it. It follows that there's still less agreement about what our potential market is, and about how we should package our product so that it has what the trade calls "customer appeal."

This confusion is illustrated by the wide difference between the definitions of conservation that are being used these days. I cite only two of them here, but there are lots more.

According to the first of these, conservation is concerned with maintaining the "balance of nature." Personally, I've never understood just what was meant by that phrase "balance of nature," although I gather that it's intended to convey the idea that a certain established relationship in the physical world should be maintained. Although I admit I haven't looked too hard, I haven't come across any relationship in the physical world that has not been profoundly disturbed at one time or another—if not by earthquake, wind and fire, then by weather or some other factor within the province of Nature itself. And certainly the influence of Man has altered, and continues to alter, almost every conceivable natural relationship, and hence has upset whatever balances may have existed before he appeared on the scene.

This is probably an inadequate and perhaps unfair way of disposing of the "balance of nature" definition, but I think it will become apparent as we go along that at best this definition is inadequate to suggest the true nature, and the full scope, of conservation.

A second definition is better, I think. It says that conservation is "the wise use of natural resources." And so it is. But conservation is also something more. This definition suggests merely the practical angle, but in my opinion conservation has implications that go far deeper, and offer rewards far greater, than anything which the phrase "wise use" brings to mind.

A definition that I think might be more adequate would run something like this: "Conservation is a science and a philosophy, combined as a dynamic working force to solve problems arising from Man's relationship to his physical environment." I think a definition worded something like this suggests more of the true scope and the ultimate potentialities of conservation. It suggests—as no other definition does that I know of—that conservation is concerned with man's spiritual and mental, as well as his

material welfare. It is not enough, for example, to use our forests wisely, with the idea that good forestry is an end in itself; the end is greater human happiness, and good forestry is merely a means to that end.

We shall have more to say about this expanded interpretation of conservation as we go along, but if you will accept it at least for the time being, and if we can assume that we are substantially agreed on what it is we're trying to sell, then we can proceed to the next problem—how do we sell it. I assume this is the primary problem facing public relations men, and as aforesaid, that includes me as an editor.

It seems to me that conservation has had what we in the trade call a poor press. Until very recently at least, it hasn't gone over very big with the public. It hasn't captured the public's imagination. The public can take it or leave it, and usually the public prefers to leave it—as it leaves chemistry to chemists or atom bombs to nuclear physicists. In other words, the public is inclined to feel that conservation is a specialized field, best left in the hands of trained technicians.

The confusion about the nature and scope of conservation, noted in our discussion of definitions, is no doubt partly responsible for this. But I think there are several other good reasons why conservation has had a poor press. In the first place, it's a young science—and if it is anything more than a science (as I have suggested) then whatever else it may be is a virtually unexplored field. It is perhaps to be expected that anything so comparatively recent as conservation should be widely misunderstood, not only by the public, but by those in charge of the various mediums of educating the public. There is simply a very small heritage of experience on which to draw.

But I feel that a much more important reason why conservation has had a poor press may be laid at the door of conservationists themselves. Far too many of us are purely technical men—foresters, game managers, aquatic biologists, agronomists, or specialists in some other field of conservation—and as such we have a profoundly regrettable tendency to keep to ourselves. As with scientists in other fields, specialists in conservation tend to lock themselves in an ivory tower, each pursuing his own special interest, wholly

absorbed in it for its own sake, far too indifferent as to what's going on outside.

Perhaps as an extension of this tendency to isolate ourselves and pursue our own interests, literature about conservation is relatively abundant—but, alas, almost wholly unread by anybody but other conservationists. Not only does the conservationist lock himself away from the general public, but he locks his information between the covers of an equally impregnable pamphlet or book. As an editor, I have time and again stumbled upon information, either in printed form or obtained through conversation, which my limited experience tells me would make interesting and important reading for the general public. But the author of this information either wants it printed in the *Journal of Herpetology*, or he doesn't want it printed at all, or he isn't ready to divulge it yet, or he just doesn't want to climb out on a limb. I hate to think how much good material has been buried *with* a scientist, or buried *by* him.

You may argue that in the past year or so several books on conservation have appeared on best seller lists. Granted, there was sound conservation in these books, lots of it, but I respectfully question if that's what made them best sellers. These books had one thing in common, however, that is a sure-fire attention catcher: They forecast doom, or suggested that only dire remedies could forestall it. That's a recognized technique in selling books, but I doubt if it's the best way to sell conservation. Such publicity may give our cause a momentary jab in the arm, but then what happens? Once the scare has worn off (which takes a surprisingly short time), the public looks around, finds that the doom forecast has not yet arrived, and begins to doubt if it ever will. Furthermore, the public appears to have a sort of innate confidence in its scientists (including conservationists) to avert by one means or another such a catastrophe as national starvation, and as far as I can see that confidence is justified. Everybody knows, for example, that as our farm acreage has declined, production per acre has more than made up the difference. Our scientists did a good job on that one. Maybe too good, because as far as our food supply is concerned, our problem now is not a shortage, but what to do with the surplus. Right now, we're pouring kerosene on potatoes. But the public seems to feel that the scientists can do still better if they have to —and so do I. And if given the chance, they could do it for other countries that need it more than ours.

Each of the above reasons why conservation has had a poor press suggests its own remedy. If conservation is a young science, it will grow older rapidly, and the aging process can be stimulated. If the scientists in our field persist in locking themselves and their knowledge from the general public, we can pick the lock or coax them out. (Our job here is to convince them that they're really not prostituting their science, or sacrificing any of their personal integrity, by communicating with the general public in terms that the general public can understand. Now they communicate only with other scientists, in terms that only other scientists can understand.)

And if our literature has been drab and narrow, we can brighten it up and broaden it out, and pass it into more hands. If our attempts to popularize conservation by threatening people with dire consequences if they don't swallow our pills—if these attempts have been misdirected, then we can redirect them.

But a whole other field—call it the aesthetic field—remains virtually unexplored. We must make our appeal to the public of a far broader nature than it has ever been in the past. We must go well beyond the advocacy of mere conservation practices, important as these are in themselves. We must show how conservation is related to the social and spiritual welfare of man, man in the street as well as man on the land. We must be prepared to establish the connection between conservation and the arts, between conservation and our cultural heritage. We must be prepared to show that a farm pond has other (and perhaps greater) values than are obtained by the mere impoundment of water; that a properly managed forest is more than a good stand of trees.

What more is it? At this point, I should like to refer again to our last definition, in which I suggested that conservation is concerned with the solution of problems arising from Man's relationship to his physical environment. The key word here is *environment*. The immense importance of environment to Man's development has been recognized for a long time; the direct tie-in between conservation and environment, for some reason, has not. Yet when you stop to think of it, it's perfectly obvious that the man who

takes a battered, barren hillside and plants it to larch, is doing a lot more than merely raising a crop of trees. This man is at work on his environment.

If you accept this interpretation, then you must agree that there's a lot of conservation work that needs doing. In New York, for example, we have almost six million acres of badly worn abandoned land. What to do with this land is a problem in itself, but a far more serious problem is what to do about the people, sometimes whole communities, who are for one reason or another chained to this land. The physical deterioration of the land is in itself sufficient reason for putting conservationists to work on it, but the spiritual and cultural deterioration of the human prisoners it holds is a far more urgent reason. We have no time here to comment on the "rural slums" that have appeared in so many sections of our country, but I'm sure you all know what I'm talking about. Suffice it to say that it has already been proved, in my State as in others, that the revitalizing of the land is essential for the regeneration of the people who live on it. The land—the hills and the fields and valleys—is their environment.

It's worth noting too that Man's physical environment has been responsible for some of the richest parts of his cultural heritage. Many of our greatest writers and artists have drawn their inspiration from that environment. Conservation has tried only feebly, if at all, to establish its connection with the writing of, say Emerson and Thoreau, with the poems of Wordsworth, with the painting of Winslow Homer. But the connection is there. We should make the most of it. If we do, I feel that we can draw to conservation a whole class of new friends, and that's something we need perhaps more than anything else—new friends and new blood.

Last summer (if you will put up with a bit of personal reminiscing) I was talking to George Allen, now our Ambassador to Yugoslavia. He was then Assistant Secretary of State in charge of the Voice of America, and he was telling me about the public libraries maintained by the Voice of America in many of the countries of central Europe. The people in these countries, he said, were desperately hungry for any information about America. Even railroad timetables were studied for hours. But of all the material available in these libraries, the most sought after had to do with the land and land use in America. Farming, forestry, soil conservation, farm ponds, fisheries, game management—anything that had to do with the way we manage our physical resources—they simply couldn't get enough of it. Mr. Allen asked me if I could supply him with some back issues of our magazine. I said we had a few, how many did he want? A million, he said, wouldn't be too many.

I mention this only as an indication of the appeal that conservation has beyond our own border. Evidently, it has an immensely strong appeal. Problems arising from Man's relationship to his physical environment exist in every country in the world, and if, as I have tried to establish, the primary function of conservation is to deal with these problems, then conservation appears as an extraordinarily attractive and potent national and international common denominator. Common problems provide common meeting grounds; they bring people together, as they have brought us together this morning from all over the United States.

Some day, perhaps, if we do a good job of interpreting conservation, if we establish it on the high plane where it belongs, if we win the friendship of all those people who are only waiting for us to make the first gesture—then some day perhaps conservation will bring us together from all over the world.

THE DESMOND ARBORETUM

by John A. Ruskowski

IN a very beautiful setting on high ground overlooking the Hudson River, a living museum of woody plants is now being established. From far distant native habitats many trees, shrubs and woody vines which even a traveler may see but once in a lifetime have found a new home here at the Desmond Arboretum. Side by side with elms, maples and oaks native to New York stand graceful Canadian larches, gnarled Austrian pines and sturdy giant sequoias. Hundred-year-old beeches tower over youthful specimens of foreign origin which traveled many miles to find their place in the earth again.

Two old estates, joined together not many years ago, provided the "groundwork" for the Desmond Arboretum, located about three miles north of the City of Newburgh. These estates, both landscaped shortly after Civil War days, included a number of native American and foreign trees which had been well cared for. In the fall planting season of 1939 the first additions were made by State Senator Thomas C. Desmond, owner and developer of this tree collection. New plantings have been made in the proper spring and fall seasons every year since then.

The Desmond Arboretum, consisting of a comparatively small (45-acre) plot, contains 767 species of trees, shrubs and woody vines, all marked with both their English and Latin names. Included in these are 202 species of native American trees, 192 species of native American shrubs, 143 species of foreign trees, 170 species of foreign shrubs, 18 species of native American woody vines, and 42 species of foreign woody vines.

Some of the species added since 1939 were found in their wild state and transplanted to the arboretum, but most have been purchased from nurseries throughout the country. Specimens shipped from as far north as northern Canada, as far south as Florida and as far west as California are doing well.

Such great care has been devoted to the likes and dislikes of each individual plant and to the ideal conditions for its growth, as indicated by horticultural authorities, that failures in several thousands of transplantings (including those of large specimens shipped from long distances) have been kept at the amazingly low figure of less than 2 per cent.

Senator Desmond hopes to include eventually in his arboretum at least two and in some cases four or more specimens of all native American trees, shrubs and woody vines which may prove hardy in the climate in which Newburgh is situated.

The Desmond Arboretum has been blessed with a soil of good quality—neutral or slightly alkaline. But supplemental feeding of chemical food has been found beneficial to some of the older and larger trees as well as to some of the newer ones whose initial progress was slow. A special acid-soil bed has been prepared for rhododendrons and other acid-soil loving plants.

In larger arboretums, plants are usually set out according to their botanical classification. Such arrangement is more practical and convenient for botanists who use arboretums for research and study. But here in Balmville, where the arboretum surrounds the home of Senator and Mrs. Desmond and where acreage is comparatively small, this arrangement is hardly necessary. While great consideration is given to sun and shade, acid and alkaline soil, wet or dry earth, and other factors related to the likes and dislikes of individual plants, an effort is made to achieve the maximum landscape effect.

Special interest has been centered on the Desmond Arboretum not only because of some of the excellent specimens it contains, but also because of the attempts which have been made to establish doubtfully hardy native American species in the Newburgh climate. One of the specimens of *Magnolia acuminata* (cucumber tree magnolia) in the arboretum is generally considered to be one of the best representatives of this species to be found anywhere in the United States, and was photographed by Montague Free for his "*Beautiful Trees of America*" series. The arboretum contains a number of other especially large and outstanding specimens of *Ulmus americana* (American elm), *Acer saccharum* (sugar maple), *Quercus robur* (English oak), and *Ginkgo biloba*.

On the experimental side, in cases where there is some doubt about the ideal conditions for the growth of particular plants, two or more are often set out in dissimilar locations to determine where they will thrive best.

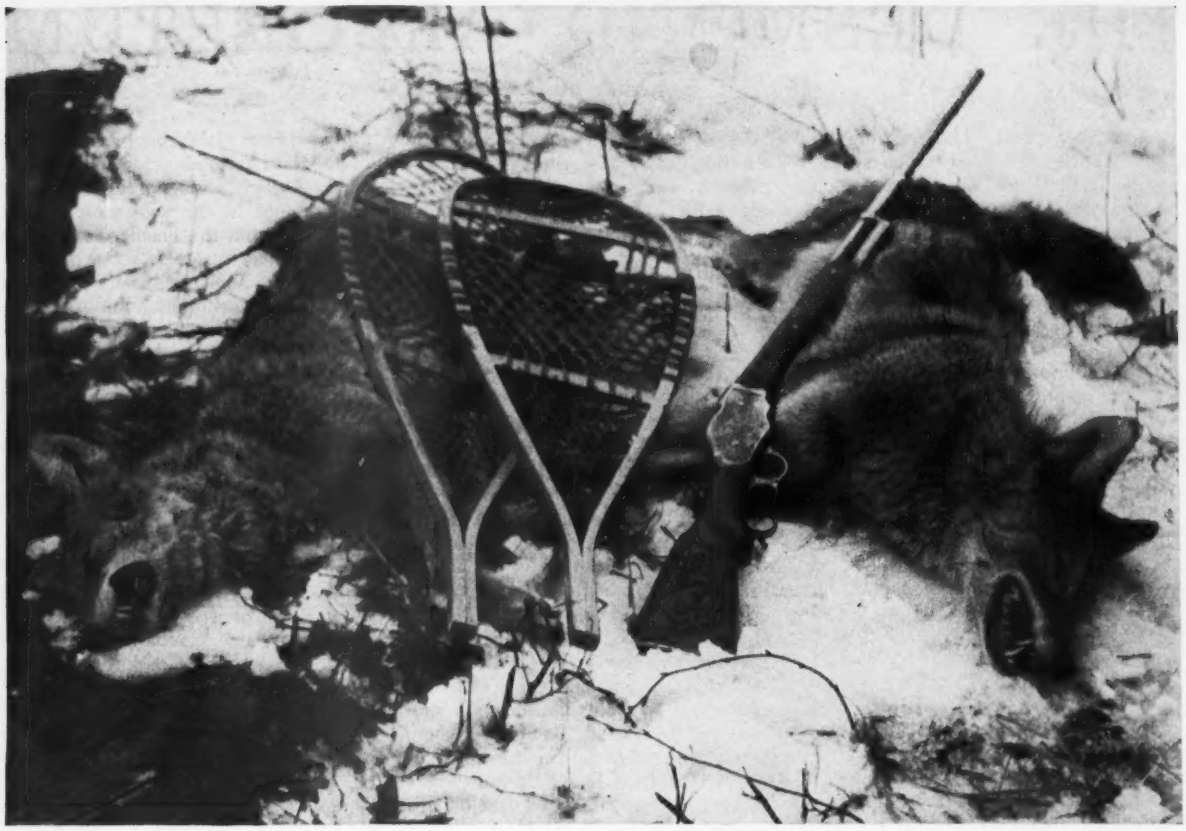
In April, 1945, Senator Desmond obtained from California two specimens of *Sequoia sempervirens* (redwood). These *Sequoia sempervirens*, which are never found in the wild more than a few miles from the Pacific Coast, were planted when they were about four feet high, and flourished during their first summer in Newburgh, gaining nearly a foot in height. They survived the mild winter of 1945-46 and the summer of 1946, but succumbed to the icy blasts of the Hudson Valley the following winter. There was no real expectation that the *Sequoia sempervirens* would adjust to the northeastern climate, but the experiment was considered worth trying.

An experiment with some California neighbors of this tree, on the other hand, has been far more successful. Four excellent specimens of *Sequoia gigantea* (giant sequoia) shipped by railway express from California in June, 1943, are still thriving here and show every evidence of being thoroughly well established. Only tender, three-foot plants when they made their long journey across the United States, these *Sequoia gigantea* are now proud and sturdy twelve-foot trees.

Six maintenance men are employed continuously at the Desmond Arboretum, and extra help is engaged as needed during the busy months of summer. Pruning is a never-ending job, and under the watchful eye of an expert forester the natural enemies of trees—blight, red spiders and various tree diseases—are detected and combatted before they can gain a foothold. But the primary effort is directed at keeping all trees so well fed and healthy that they will have sufficient strength to resist the dreaded enemies that prey upon them. Healthy trees are, of course, more beautiful trees—an important factor to be considered where trees are naturally the year-round attraction.

IN recognition of his development of an outstanding aboretum Senator Desmond has received some of the most coveted awards granted by horticultural societies. And obviously, his experiments with soils and species have been of great interest to conservationists. Although the arboretum is privately-owned and privately-managed, botanists, horticulturists, park executives, nurserymen and others interested in trees are always most welcome here, and can readily obtain admission by application on any day of the year.

At left, top to bottom: the Hudson River setting; rhododendron (minus and Carolinianum album); Carolina silverbell; and Alabama fothergilla



Mr. Streever's 50-year-old 10 gauge Winchester repeater, which fires a modern cartridge with 4¾ drams of smokeless powder and 1⅝ ounces of #2 chilled shot, and two Warren County "brush wolves" killed in 1951. Incidentally, Warren County pays a $75 bounty.

More talk about coyotes

1. HUNTING THE MYSTERY ANIMAL

by Fred S. Streever

WE have a new game animal in New York State. To be more exact, he is a "beast chaseable" and, although a "stinking beast" and uneatable as to flesh, has a handsome fur coat from which the successful hunter may preserve a distinctive and enduring trophy. Moreover, he is probably the wisest and most crafty of any wild animal on earth.

It was about 20 years ago that reports of the presence of wolves near Vischer's Ferry and Jonesville began to reach us at our home country in Saratoga County. These reports were received by most hunters with general skepticism but grew in volume until they could not be ignored by local houndsmen like myself.

It was not, however, until the low cycle of red foxes was reached in the early 1930's that we turned toward wolf hunting as an objective for our personal pack of trail hounds. At that time there were practically no red foxes left for chasing by the hounds; one might search for days on a fresh snowfall and find not one single red fox trail.

An ardent and reliable fox hunter gave us detailed reports on the presence of the wolves on the Luther Forest plantation. At that time this tree plantation was around 15 years old and had grown into an extremely dense and well nigh impenetrable thicket of some 8,000 acres. Eventually a wolf was killed there, as I now recollect, by Jack Hallren of Wayville, and was brought to the Saratoga County Court House, whither I was summoned by telephone to identify it (as the nearest available "expert").

Even at that time I had not been positive but only the briefest of examinations was needed to show that this was no dog, nor fox, but in all surface resemblance had the same general appearance of the brush wolves of Arizona and the timber coyotes of Wyoming, of which I had seen and killed specimens during previous big game hunts for elk, big horn, deer and javelina in those states and in Sonora, Mexico.

On those big game hunts into the West, or even in Canada, a wolf was, and is, more or less commonplace and

not worthy of a hunter's attention. In home country of New York State 'twas something else again and, to me and other houndsmen, of prime importance as a quarry worthy to take the place of the then well nigh extinct red fox.

Some of our younger hounds took up the cold wolf trails more readily than did the older and more seasoned hounds. We killed several of the brush wolves and collected bounty of $10 per each from the Saratoga County authorities.

I sent in detailed stories of the hunting to several magazines of the period, together with photographs. Among such that I now recollect were National Sportsman, Outdoor Life, Field & Stream and also a well illustrated article in Natural History Magazine, the journal of the American Museum in New York City, which termed the article "Mystery Animal."

Upstate wildlife authorities at that time insisted that these were "feral dogs" but Doctor Anthony, well known mammologist to whom I sent several specimens, gave his opinion that they were descendants of western coyotes. He also stated that certain primitive dogs and wolves were almost identical and practically impossible to differentiate positively (as to dentition and skeletal differences). As I now recollect seven of the creatures were killed ahead of my hounds.

Time moved on; the foxes returned. A governmental project occupied the area of the rapidly growing Luther pines and Federal guards prohibited all hunting therein.

We transferred our kennel and hunting to a wilderness area some ten miles distant from Luther's whence we hunted, fished and pursued our usual "life of Reilly." Old age and the Second World War moved in on us so that we gave up our Omar's Paradise on the Milton Plateau and headed into retirement northward on to the shores of beautiful Lake George.

By this time our personal pack of trail hounds had increased to over 100 members. All of our old favorites whose ancestry we had bred and who had hunted and killed wolves at Luther's had passed on to the Happy Hunting Grounds; Ruffian, Rambo, Old Min, Fritz, Keene, Shotgun Joe and the two Oklahoma hounds that we had purchased, Old Rock (Trigg) and White Buck (a Walker), were at rest in the wilderness dog cemeteries that lie along our trail of life the last half century and more.

Then word came that wolves were killing the deer on our old stamping ground near Stony Creek in Warren County. We had hunted deer there

every fall for a quarter century back. Yet, as is the way of all hunter men, every detail of topography or hunting incident remained clear in our mind. Among such, the dense balsam thickets around the mouth of Almond Brook and on the farther side of the Wolf Point Flow Dam in Stony Creek Township. Therefore, we found it quite easy to believe Cousin Edward Streever when he told us of mighty kills and noisy pursuits in that neighborhood occasioned by big wolves killing or driving off the deer into other areas.

By now I had passed the three score and ten mark. The woods and waters were still the best place to be, but I could no longer keep up with the hounds so I sought and received encouragement and help from the Conservation Department who sent several good woodsmen, more or less acquainted with the wolfish creatures, and much moral encouragement, of which latter we were in dire need.

During the past two winters we have made excursions far into the back country where there is no interference by auto or human neighbors. In this we were aided by Cousin Ed. Streever and other local hunters. We used Jack Baker's camp and lumber tractors to get well back into primitive surroundings. Not that there are no wolves for the chasing closer at home.

There are at least three family groups of wolves nearby the Log House where I now live. One wolf family is on Buck Mountain across on the Washington County shore. Another is on the Catamount ledges and still another family up around a group of three small lakes lying westward of Spectacle Ponds.

Brush wolves shown in these photos were all killed from ambush ahead of or else by the hounds and all, unless otherwise mentioned, within the last two winter seasons. Most of them in or near Wolf Point thickets aforesaid.

Up here amid the deep northern snows we have not depended upon our hounds alone to catch and kill these brush wolves as is the habit of wolf hunters in our southwestern states. There the hounds are hunted in couples or in private packs of six to a dozen fast, tough trail hounds. Wolf hunters there would scorn to shoot the wolf. Hounds rout, chase, catch and kill them unaided and an occasional hound can be found that will catch and kill a wolf by himself. Sometimes a lone hound is severely cut up or even killed.

In fairness, however, it must be said that the brush wolves or coyotes of Texas, Oklahoma, and Missouri rarely weigh more than 20 pounds. Farther north, among Wyoming fir and pines a similar animal is called the timber coyote and rarely exceeds 30 pounds. His color of fur varies from light gray to dark brindle and he is a predator on the huge flocks of domestic sheep which graze on the open country. The smaller Mexican coyotes or brush wolves roam the open country, but the Wyoming timber coyote is very rarely seen outside the timber concealment.

In Michigan, George Shiras noted the unexpected appearance of coyotes among the native timber wolves about 1912. In Tennessee, Government wolf trappers were engaged in 1934. At Oldtown, Maine, wolves were reported in 1943.

Fifteen years ago the Saratoga County adult brush wolves weighed 28-32 pounds, but a very considerable and general increase in the size of the immigrants is to be noted now, many adult individuals weighing over 50 pounds—and considerably more in some cases has been reported.

By some this increase of average weight has been argued as an indication proving that crossing coyotes on domestic dogs has taken place in New York State. Personally, I do not think such a continuation of what I would call a rare case of hybridization is the explanation. Instead, I assume that, as the history of the wolves of North America will show, these canines, like all the family, very rapidly and readily increase or decrease in physical proportion to meet the changes in environment and food which it is their nature to seek by moving into new country.

Houndsmen and hunters throughout the southern and western states with whom I have corresponded over 35 years during my connection with the Kennel Column of a major hunting magazine, are unanimous in calling them, rather collectively 'tis true, merely "brush wolves." In this nomenclature we are joined by some mammalogists.

We are merely hunters and houndsmen, however, and when it comes to identifying the sometimes very slight difference between such sub-species, we leave that to the scientists who, by the way, seem to be having far more trouble and less fun than we are.

In the authoritative work of Young and Goldman some 30-odd species of American wolves are described; in Stanley Young's subsequent work he lists nearly 20 species of coyotes. Webster's Unabridged states that a coyote "is a small wolf." When I questioned Ira Gabrielson as to how big a coyote got to be he said, "About 20 to 25 pounds." I said, "What would you call him if he weighed 50 pounds?" Ira said: "I'd call him a hell of a big coyote, but, remember, you're the one who said he weighed 50 pounds."

In any event, pest 'though he be, whether he be wolf, coyote or coy-dog affects him as a sporting proposition not one jot nor tittle. He's here to stay. "Making the best of it" seems to me to constitute the use of good trail hounds and something coarser than rim fire .22 or a charge of bird shot with which to shoot the critters. Maybe we should leave it all to the hounds, as they do in Texas and Missouri. "A wolf by any other name would smell as sweet—to a hound."

2. TRAPPING THEM

THE Adirondack coyote is probably here to stay. Although his tribe doesn't seem to be increasing as rapidly as in some other states, coyotes are at least holding their own in New York.

This proves itself in a number of ways. I have been trapping several different areas for four years running, and I've caught about the same number of coyotes each year and the signs looked about the same each year. Several other trappers I know have had about the same experience. Also, the bounty records of the various counties seem to stay about the same year after year.

Some people seem to think our coyotes should be exterminated, for fear they will become too numerous and do too much damage—to our deer and hare populations, for instance. As yet there has been no way discovered to exterminate the coyote population. People have been working at it for years with guns, traps and poison, but we still have coyotes and probably always will have.

It is a matter of personal opinion as to whether this is good or bad. In spite of the rumors I've heard of coyotes killing or running all the deer out of a section, I've yet to find such a situation. There are places where I've had my best luck trapping coyotes (around Newcomb and Mountain View) where the deer population is as high as any place I've ever seen, and on the other hand the coyote population seems to hold pretty steady in a section near Silver Lake where there are few deer. This situation has been the same for four

years. Maybe that proves something.

The range of coyotes seems to be spreading—or the animals are shifting around at least. There are a few places where they seem to stay put, but mostly they seem to drift, staying for a while in a place, then moving on, then perhaps returning from time to time. A couple of places they seem to stay are around Newcomb and the Town of Black Brook. There are also some other places in St. Lawrence, Franklin, Essex and Warren counties, where they are reported to be fairly permanent.

In Franklin County south of Owls Head there are coyotes from time to time. During the summer they pass through and sometimes stay around for a while, but sooner or later they move on. There is another place in Essex County, near Minerva, where they stay for longer periods, and then disappear again.

Possibly coyotes would never get very thick even if left alone. They seem to prefer certain types of cover and terrain of which there is only a limited amount in the Adirondacks. Their preference seems to be for partly open country such as burns, used and abandoned farm land, and evergreen plantations. For example, the abandoned farm land in northern Franklin County in the Town of Belmont, or along the Blue Ridge Road in Essex County, is good coyote country. So is the extensive Scotch pine plantation in southern Franklin County between Standish and Mountain View.

About eight counties pay bounties on coyotes, ranging from $25 to $75. Whether the bounties have any effect on the coyote population is a question that gets knocked around a lot, but there's no doubt that the bounties do the trapper a lot of good. There are many animals turned in for bounty that would have been taken anyway, and no doubt some cheating is done; but if a county wants to pay bounties on animals they believe are doing damage, there are plenty of us who will be glad to collect them.

The pelts are worth very little just now, since long haired furs are not in fashion. But there were times when prime, light colored, fine furred coyote pelts from northern states were worth as much as $25, and maybe some day they will be again, because the fur trade is trying to make long haired furs popular again.

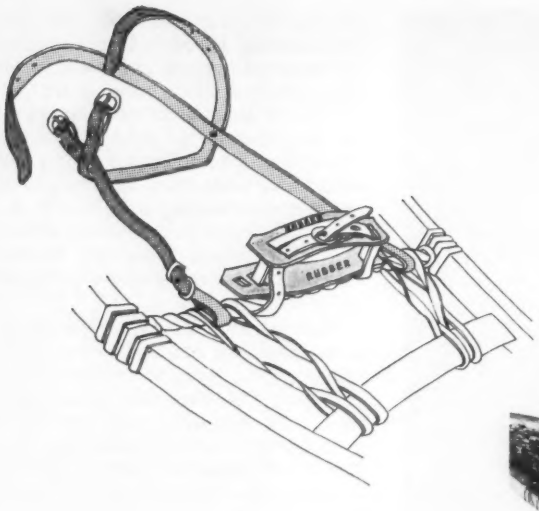
But even though the pelts are worth very little and bounties are uncertain, there is a lot of sport to be had trapping coyotes. And being as how we *have* coyotes, we may as well enjoy the sport they can give us. There is no closed season on them, and few restrictions on the ways in which they can be taken. Some deer hunters take a few traps along with them and get as much fun out of trying to outwit a coyote as they do out of their hunting. And when you've gotten so you can catch coyotes, you can be sure that you have graduated from the "sooner" ranks.

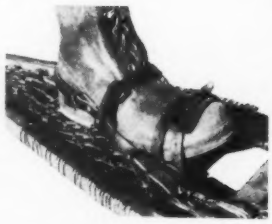
Trapping has more thrills and disappointments than most people realize. There can't be anything more exciting than to go up to a coyote set that is secured to a drag and finding the trap gone and a drag trail leading to a spruce thicket. Or to see a coyote standing out on a burn in a set that is secured with a stake. This is something that never gets to be "old stuff." Trapping is my business and I've been at it for over 30 years, but I still get a bad case of buck fever when I see a coyote in a set or when I'm following a drag trail. But once you've caught the coyote, killing them is like murder. That's the part I don't like; I figure they live according to natural rules, and so do I.

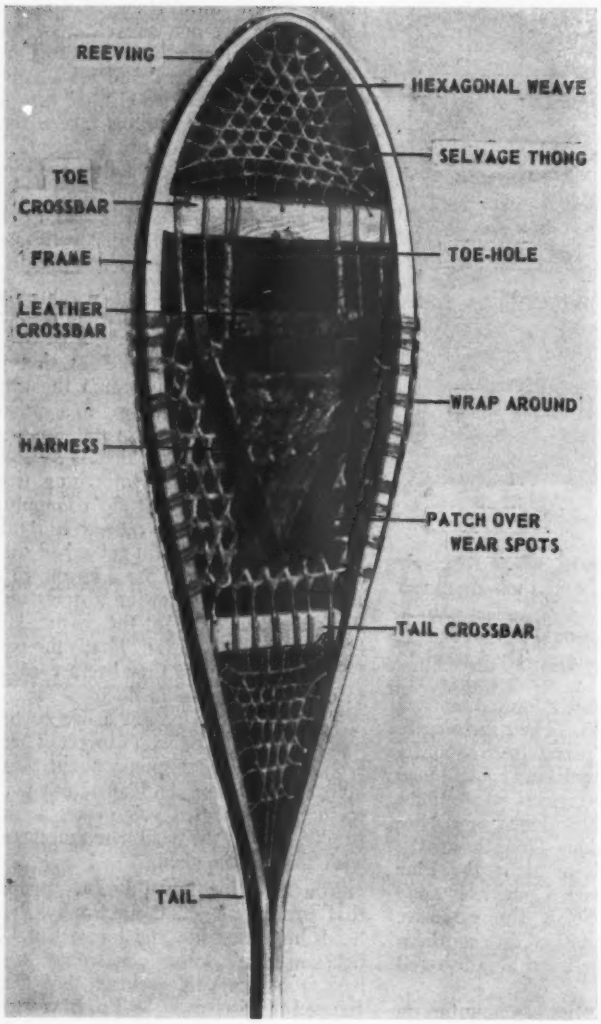
Your first close look at a live coyote is an experience you won't forget. There is something almost spooky about those light colored eyes. And to refresh your memory the tanned pelt makes a nice trophy, as does the head when mounted with the mouth open.

You probably know lots of people that are proud of their trophy deer heads, mounted fish and birds. But I'll bet you don't know very many who have a coyote pelt or head that they trapped themselves. —Ed. Maunton

SNOW







FLORSHEIM doesn't make 'em but the well-dressed conservationist wears them every winter. In winter, snowshoes become key tools in game research, game management, forestry, trapping and trail work. Without them, many wintertime conservation activities in the field come to standstill.

In the East, New York lies on the southern edge of the distributional range of snowshoes. Consequently, snowshoe making in New York is almost nonexistent. Maine and Michigan, both in the hearts of snowshoe country, have just about cornered the Nation's snowshoe market. However, scattered here and there in New York, people like Westover of Gloversville and Potter of Olmsteadville make limited numbers of excellent shoes. The Conservation Department mostly uses Westover's.

Snowshoes are not quite as old as the hills but pretty near—dating back to 4,000 B. C. or earlier. No one knows who made the first pair but it seems the snowshoe concept was invented only once and then had a contagious distribution, pushing back frontiers, spreading culture and extending communication lines.

Snowshoes had their origin somewhere in Asia—Siberia most likely. There were two kinds: Long flat boards (forerunner of the ski) and round hoops with twisted plant materials for webbing (bearpaws). It's a toss up as to which form is the older. From Asia both spread westward and eastward. In Europe, the bearpaw seems to be the older, but wooden snowshoes preceded the bearpaw to North America.

The Algonquins were probably desponsible for hexagonal weaving and the use of the selvage thong. Rectangular weaving, the use of the toe-hole, the pointed heel, the single crossbar without mortising, the mortising of the crossbar into the frame and finally, the standardizing of two crossbars in a snowshoe were invented either by Athabascans or Algonquin Indians. The present day ski staff is correctly called the snowshoe staff, since it was first used with snowshoes. And, oddly enough, the white man hasn't added a single new idea to the making of snowshoes.

Like everything else, snowshoes require care. Discomfort, injury or loss of life may result from careless maintenance. Some handy tips on snowshoe

SHOES

care are: 1) Carry spare tanned rawhide laces for quick repair. A broken snowshoe brace or frame can be spliced with a branch and the lace. Some snowshoe harnesses require laces, and spares are a must for these. 2) In freezing and thawing weather, tie a square piece of rubber inner tubing over the spots that wear the most, especially the heel. Also wind a rubber strip around the rawhide crossbar at the toe-hold to prevent wear and icing. 3) Use rubber pads instead of leather for the toe harness. Leather absorbs water and ices up, rubber doesn't. (See drawing.) 4) For climbing two small bolts can be placed through the upper wooden crossbar with the bolt extending about ¼ inch beyond the nut. These will give you a better grip in climbing. 5) Wrap rawhide over the frame at the toe to prevent wear. 6) Snowshoes come in different lengths and widths. Buy them to fit your weight, sex and the work you intend to do. Get modified bearpaws or standards for brush work, and long narrow trail shoes (pickerel style) for hard crust or established trails. For all 'round work, standards or modified bearpaws such as Westover's are best. 7) For mud, water or marsh walking, try using snowshoes. 8) Dry and varnish or shellac your shoes every night; or, better yet, use two pairs alternately. 9) During the off seasons, snowshoes should be hung in a cool place after being repaired. Rawhide thongs (untreated) should replace temporary repair thongs. Soak rawhide in water, stretch and put on wet. These will dry taut. Next varnish or shellac. Blocking to retain up-turned toe is not necessary for modern shoes. 10) Shellac is good temporary cover, but varnish is best. Our game research men have found penetrating varnish (Country Gentlemen's Stone-Flor) to be better than non-penetrating (Spar Varnish). Spar varnish is next best followed by shellac. Give shoes 4 or 5 coats spaced about a week or so apart.

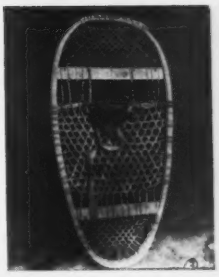
Snowshoeing is a delight and a convenience. One pair with care will last several lifetimes. They make swell Christmas presents and cost about $20. Thousands use and enjoy snowshoes and thousands more could easily add to their winter's pleasures if they knew the simpicity of snowshoeing. Snowshoeing requires no art, no knack, no lessons. Just strap them on and walk off.

—Nick Drahos

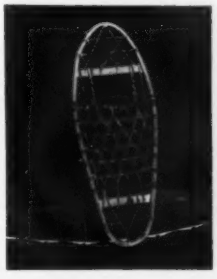
Eastern Cree, wood. Owned by Fort Ticonderoga Museum.

Iroquois, temporary shoe with elm bark webbing. N.Y.S. Mus.

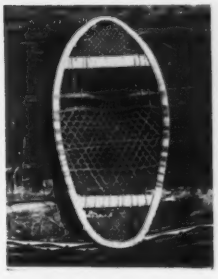
BEARPAW



Modern bearpaw. Owned by C. W. Severinghaus, Voorheesville, N. Y.

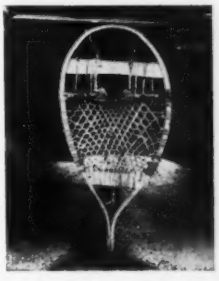


Westover modified bearpaw, no tail. F. Westover, Gloversville, owner.



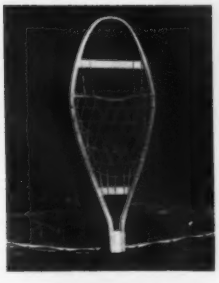
Modern bearpaw made at Piseco Lake. Owner: F. Westover, Gloversville.

Maine bearpaw, bent toe. Owner: N.Y.S. Conservation Dept.



Seneca Iroquois. Owner: Fort Ticonderoga Museum.

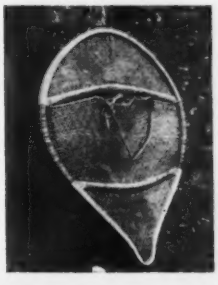
Modified Westover bearpaw with tail. Made by Floyd Westover.



Bent toe Mohawk. Owner: Fort Ticonderoga Museum.

Modified Westover bearpaw w/tail and nylon webbing.

Naskapi-Montagnais Indian beavertail. Owner W. Petty, Saranac Lake.



Naskapi-Montagnais Indian swallow-tail. Owner: P. W. Fosburgh, Cherry Plain.

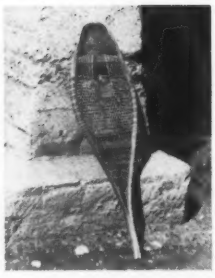
TRAIL

Round toe Micmac. Owner: L. P. Evans, Elizabethtown.

Chickasaw Ojibway. Owner: C. W. Severinghaus, Voorheesville.

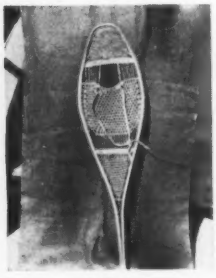
Iroquois, left shoe. Owner: Fort Ticonderoga Museum.

Modern Cree bent toe. Owner: L. P. Evans, Elizabethtown.



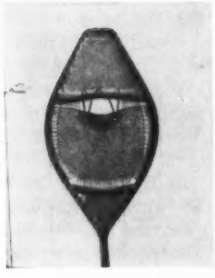
Square-toe Huron. Owner: J. P. Matson, Perry.

Intermediate toe Huron. Owner: Ft. Ticonderoga Mus.



Square-toe Cree. Owner: C. W. Severinghaus, Voorheesville.

Modern Tubbs, Me. Owner: Ralph Smith, Delmar.

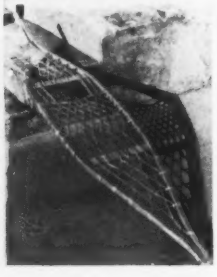


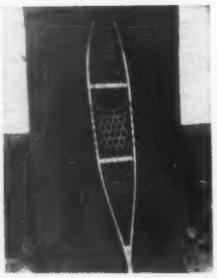
Intermediate toe Tetes de Boule. Owner: L. P. Evans, Elizabethtown.

Tubbs Guide shoe. Owner: Charles Mason, Clarksville.

PICKEREL

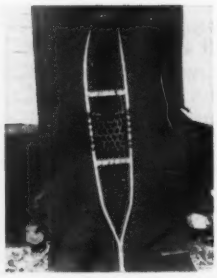
Modern Athabascan style made by F. Westover, Gloversville.





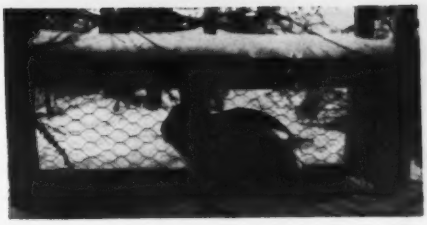
Lund square frame pickerel. Owner: E. Maunton, Clarksville.

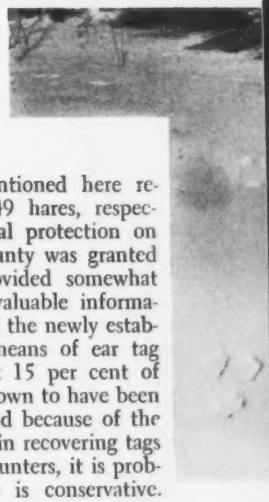
Lund round frame beavertail pickerel. Owner: E. Maunton, Clarksville.



Potter pickerel. Made by Potter of Olmsteadville.

Snowshoe Rabbits





New Homes For Displaced Animals

BY the time this article comes out in print, the re-appearance of a long departed stranger will have been discovered by hunters in several outlying sections of the State. Judging from previous experience, that stranger will be enthusiastically welcomed by all beagle owners and rabbit hunters.

Although not a rabbit in the true meaning of the word, but a very close relative, the varying hare (snowshoe rabbit) has been re-introduced to some localities where it once existed. As a forest species, hares had disappeared from most of the State outside of the mountain regions when lands were cleared for farming. Land clearing reached its peak before the turn of the century, and since then the poorer hilltop farm lands have been abandoned at an average rate of over 100,000 acres per year. With their abandonment, the lands began the long, slow vegetative succession of grasses to weeds, weeds to shrubs, and finally from shrubs back to trees, the perennial crop for which those lands are best suited. To speed up this succession the Conservation Department has planted or distributed well over a quarter of a billion tree seedlings.

As the trend back from open to forested land developed, obviously the land's capabilities for supporting game changed. Whereas hares had disappeared with the clearing operations, it seemed logical that with the return of woodland conditions hares could again become established as part of the natural fauna. A major obstacle to such a resettlement, however, has been the fact that many of the reforested areas are widely separated from existing hare populations by natural barriers of open land.

Therefore, a limited stocking program was called for to introduce into existing suitable coverts the minimum breeding population for re-establishing the species. A game management program to accomplish this end has been initiated, and during the past winter 454 hares were liberated at 17 sites in 13 different counties of the State. Except in one instance, there is no open season for hares in the locations where such stocking has taken place. The stock was obtained by box-trapping from areas of high concentration in the State—either in game management areas or in very remote regions where their removal would not affect local hunting opportunity. Trapping operations "back in" were made possible by the use of two snowmobiles.

Once trapped, the hares were sexed, ear tagged, and crated, after which they were held in small compartmented crates until released at the selected liberation areas. Depending on trapping success, they were held a minimum of one, and a maximum of four days between the times of capture and release. Each was given a daily ration of crusted snow and aspen or red maple twigs or bark. Delivery was made by truck direct to the liberation areas to avoid delays and excessive handling.

The present trap and transfer program had its origin in a Pittman-Robertson research project set up to test experimental liberations of game farm reared hares. When nutritional difficulties beset the latter stock to cut down production, coupled with the poor survival recorded from those released, emphasis was shifted to wild trapped stock. Several areas of varied size, location, and vegetative composition were experimentally stocked with the wild trapped hares. Stocking with wild hares began in 1947 and continued until 1949. A total of 126 were released, mostly in March, but a few were trapped and stocked during the summer.

Although results are still pending on some type areas, re-establishment was successful enough on two areas of similar habitat in Cortland County to recommend that a restocking program, at least for that type habitat, be initiated. The type habitat which appears most promising is characterized by an extensive upland area containing multi-aged reforestation blocks of spruces and pines, interwoven with open lanes.

The two areas mentioned here received only 37 and 49 hares, respectively. Until additional protection on the species in this county was granted in 1951, hunting provided somewhat incomplete but very valuable information on the progress of the newly established colonies. By means of ear tag identifications at least 15 per cent of those released were known to have been taken by hunting. And because of the recognized difficulties in recovering tags from game taken by hunters, it is probable that this figure is conservative. Furthermore, it is extremely improbable that all survivors of the stockings were taken by hunters—an assumption certified by subsequent track and box-trapping surveys. Survival, therefore, was good.

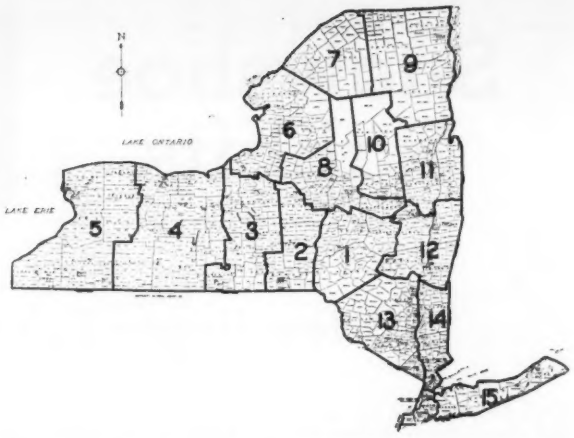
Likewise, productivity was good. In addition to ear-tagged hares taken, a recorded hunter take of 47 untagged hares was substantiated. An additional three were recovered in box traps.

From the original release points, survivors and their progeny occupied a range of at least four square miles less than two years after the first stocking. By the following year it was known that at least a 25 square mile area was occupied. These limits of spread are based on track observations, but since all the potential habitat was not adequately covered, the spread may well have been more extensive either year.

As it exists, the hare trap and transfer program will be continued this winter to stock the promising areas which have been selected. It should be clearly understood, however, that the program definitely is not designed as a sustained restocking effort. The intent is to firmly establish *initial breeding populations* and let the high reproductive capacity of the species take over from there. For, if the hares cannot maintain themselves, once established, then the habitat is not suited to the species after all, and they simply do not belong there.

—JOSEPH DELL,
Game Research Investigator

Closing the woods



FOREST DISTRICTS

EARLY Friday afternoon, October 31, we began to receive disturbing reports from our field men, from the Weather Bureau at the Albany Airport, and from our own 14 weather reporting stations in the Adirondacks. Our field men reported (with a few exceptions) that the fire hazard in their districts was becoming acute; the Weather Bureau reported that there was no relief in sight in the form of better visibility or precipitation that would alleviate the fire hazard; and our own weather stations indicated that the effects of the light rains of October 28 had now disappeared, and that fuel moisture content was critically low. With this news at hand, the few of us who were left in the office Friday night were obliged to consider seriously the possibility of recommending to the Governor that the woods should be closed at the soonest possible date. We decided, however, to withhold any decision until reports from the field could be received the next day.

Early Saturday morning, we instituted a series of telephone calls to each of our District Foresters to find out just what the conditions were in their respective areas, and to see what their recommendations would be with regard to closing the woods. The following is a sample of these calls:

SOLON HYDE (Superintendent of the Bureau of Forest Fire Control, Albany office): "How does it look in District 11?"

STAN FARMER (District Forester, District 11): "It looks bad. We had six fires yesterday and they're all still burning."

HYDE: "All under control?"

FARMER: "Yes."

HYDE: "What's the main trouble?"

FARMER: "We can't see anything with all the smoke in the air. Our fire towers can't detect the fires in time for us to get to them while they're still small. And I don't have to tell you that the woods are plenty dry. What's the news from the Weather Bureau?"

HYDE: "Not good. They don't see any relief in sight—either for improved visibility or for rain or snow."

FARMER: "Then I say close the woods. I'm pretty short of man power up here because we have to keep patrols on all the fires. We have the fires under control, but where am I going to get the men from if any more break out?"

HYDE: "O. K. then, you recommend closing?"

FARMER: "Definitely."

Phone calls to the other Districts supported the idea that there was no point in taking a chance by keeping the woods open. Districts 9 and 7 reported that they had no particular fire problem at the moment (except in southern Essex County), but suggested that if the rest of the State were to be closed it would not be advisable to leave only these two districts open. Districts 1 through 5 and District 13 (all of them along the Pennsylvania border) reported highly inflammable fuel conditions, and also a sudden and large scale influx of hunters from Pennsylvania (which had previously closed its woods) which of course increased the possibilities of fires starting.

With all of the Forest Districts contacted by 11 A.M. Saturday morning, it appeared to us in the Albany office that there was no alternative but to recommend to the Governor that a proclamation be issued closing the woods. Commissioner Duryea reviewed the reports from our Forest Districts, and on the basis of them contacted the Governor's office at noon on Saturday and recommended that the closing proclamation be issued as soon as possible. As most of our readers know, the Governor acted promptly and the proclamation became effective at Midnight Sunday. It was rescinded for all but 15 counties on November 7; for the remainder of the State on November 10.

It was unfortunate but unavoidable that in contrast to former proclamations, no preliminary warning was given to the public in this instance. Therefore, the impact of this proclamation was greater than on any previous occasion. and we estimate that the plans of nearly a million hunters were disrupted. As usual, the Department was cursed for recommending closure, and cursed for not having recommended it sooner, but in general, public response was most gratifying. Hunters already in the woods—notified by Game Protectors, Rangers, State Police, Sheriffs and Deputies — trooped dutifully out; others changed plans as best they could.

TWO factors distinguished this closing of the woods from those of earlier years: (1) The Department's fire detection system was virtually crippled by the presence of smoke in the air—smoke which originated from fires outside of the State but which often reduced visibility to the extent that observers in their fire towers could not even see the base of their towers. Needless to say, the restricted visibility also crippled our airplane fire spotting system; in fact, after one of our pilots narrowly averted crashing into Black Mountain, Commissioner Duryea grounded our planes until conditions improved. Furthermore, the presence of so much smoke in the air contributed a great deal to public apprehension; the Department received many phone calls from people who assumed that a fire was burning near at hand. Such was not often the case, but it is true that many fires escaped detection until the light of them was reflected in the clouds at night, or until persons actually in contact with these fires reported them to the Department.

(2) Conditions of the woodlands throughout the State (except in Clinton, Franklin and St. Lawrence counties) were such that once a fire started, it

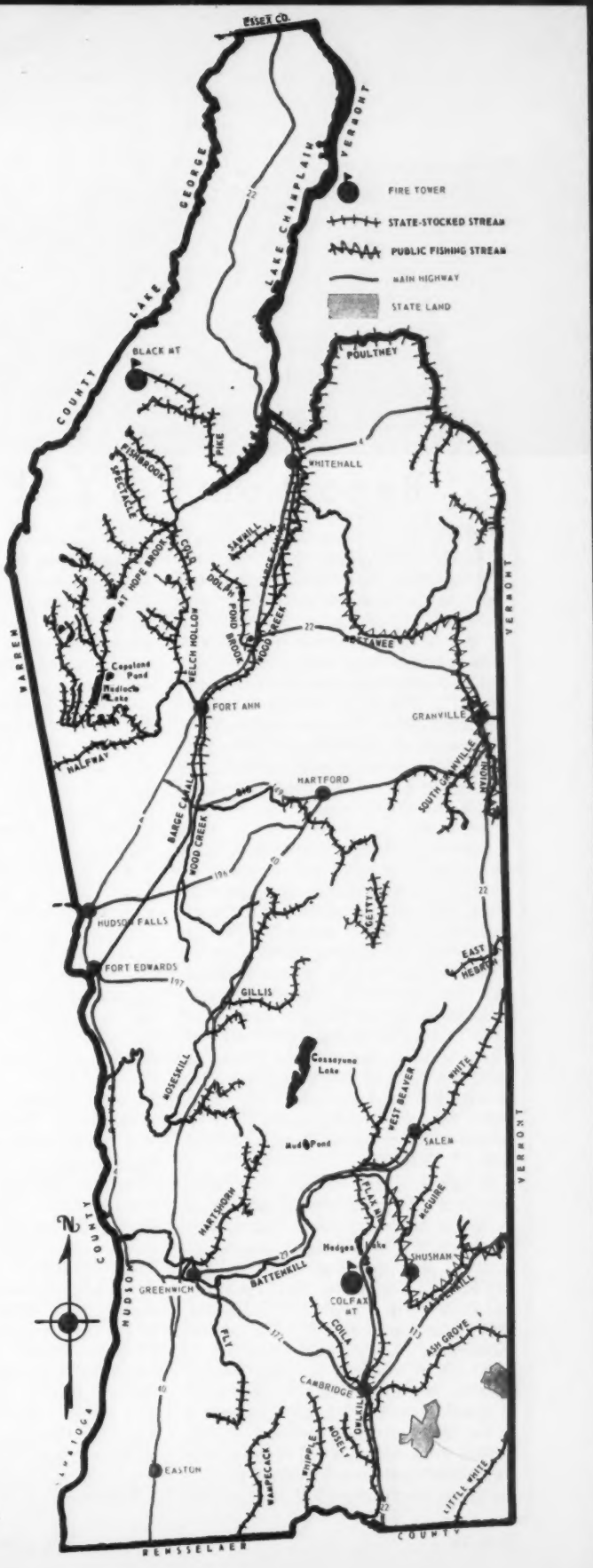
was necessary to keep men on it long after it was brought under control. This obviously meant that much of the Department man power pool was absorbed in patrolling fires, with little help immediately available in the event that any new blazes should break out elsewhere. A further factor complicating the situation was the shortage of water due to a late summer and early fall drought; in some instances, there simply was no water in the usual pot holes and streams to carry to the fire.

But the main factor which influenced the decision of the Department to recommend closing of the woods was the crippling of its fire detection system by reduced visibility. This was also the main reason why no advance warning of closure was given; a wind shift that improved visibility might have made closure unnecessary. The people of the State of New York have a large investment in their fire detection and fire control facilities, and we felt confident right up to the last moment on Saturday morning that we could handle any fires that might develop under conditions prevailing at the time—provided we could detect them in time to control them in their early stages. But with the smoke crippling our detection system, and with no relief forecast as of Saturday morning by the Weather Bureau, we decided to recommend closing. Although certain limited sections of the State appeared to be in comparatively safe condition, it was felt that minor exceptions to the closing order would only confuse the situation.

Closing the woods is a far more serious procedure than most people realize. As indicated above, the plans of approximately a million sportsmen were affected—vacation plans made long in advance, and which in most instances cannot be changed as to date. As announced promptly in the press, seasons on most game species were extended by order of the Commissioner to compensate for time lost during the closing, but this of course was little comfort to those hunters who could not change their plans. And then there are the people who cater to these sportsmen — the hotel and resort owners, the guides, and the thousands of people in this State who rely heavily upon the income from sportsmen in one form or another during the fall hunting season. On the other hand, there is the obvious necessity to take no chances on letting a fire (or fires) get out of control.

Our decision to recommend closing of the woods was made only after a careful balancing of these factors.

—Kinne F. Williams,
Asst. Director, Lands and Forests



Report on: FLY-FISHING-ONLY

UNDER the authority of Section 152, Subdivision 2 of the Conservation Law, special regulations can be made on areas acquired as public fishing grounds. As described in the April-May CONSERVATIONIST, a field test restricting areas on five of the public fishing rights streams was begun in 1952. On these streams (the East Branch Ausable, Bouquet, Kinderhook, Willowemoc and Wiscoy) a minor fraction of the entire public water was restricted to use of fly lures in sections varying in length from one to two and a half miles.

Efforts to evaluate results were made by means of a creel census carried on by Game Protectors on the restricted areas and on comparable, unrestricted parts of the same streams. The resulting records, ranging from 18 to 38 checks on the various streams throughout the season and aggregating totals of from 38 to 562 hours of angling by from 11 to 153 anglers, were analyzed. The resulting computations give comparative indices of trout catch per hour of angling. Separate figures were computed for total trout (fish kept and returned to water), trout kept, and trout over 12 inches.

A further check of the areas (both restricted and unrestricted) was made by use of electric shockers operated by the District Fish Managers, assisted in part by personnel from Fish Salvage and Law Enforcement. This operation was conducted September 9, immediately after close of the trout season (September 7). Although trout are to some extent localized in home ranges, possible migration makes it impossible to conclude that all trout enumerated in the shocker census escaped angling on the same location. Therefore, the conclusion that trout found on fly fishing areas on the one hand, and on unrestricted areas on the other hand, escaped angling on the area where found is to be avoided. Despite such difficulties in drawing comparisons, the shocker census was of value in giving much background information bearing upon the population of trout and associated species.

In order to secure a further check on the success of the fly-fishing-only experiment, the Department requested that surveys be made and reports filed by the five county federations of sportsmen's club in whose areas these experiments were being conducted. Only three of the five responded.

The Essex County Fish and Game League filed a report on the Ausable and the Bouquet, stating (1) that restricted areas on both streams were heavily fished; (2) that the fishing was fair to good; (3) that most fishermen on the streams favored continuing of the experiment in order to give it a fair trial; (4) that sentiment during the season increased in favor of continuing the experiment and (5) that a slight majority believed in the conservation values of the experiment.

The other two reports concerned the Kinderhook—one from the Columbia County Federation, and the other from the Rensselaer County Alliance. The Columbia County Federation report stated (1) that the restricted area was fished lightly; (2) that the fishing on it was fair; (3) that at the outset of the season most fishermen were opposed to the restriction but (4) as the season progressed these same men "became indifferent"; (5) that the measure was effective from a conservation point of view. The report added that "in the future, if the Department thinks it is necessary to restrict an area, it should be closed to all types of fishing."

Reporting on the same stream (the Kinderhook), the Rensselaer County Alliance said (1) that it was heavily fished; (2) that the fishing was not so good as on other parts of the stream; (3) that the reaction of fishermen was "very hostile"; (4) that sentiment was strongly against the experiment throughout the season, and (5) that it was not an effective conservation measure.

Trout waters are highly individualistic. Although all the streams produced brown trout entirely or predominantly, conditions varied so much that it is necessary to discuss each one in detail. It was evident on most streams, however, from the relative number of anglers contacted in approximately equal patrols by Game Protectors, that fishing over the entire season was heavier on unrestricted areas than on restricted areas. In all streams there were more large trout (over 12 inches) recorded in creel samples from the unrestricted areas. Another general observation was that on most streams there was little or no difference between success per hour of effort on a sample of anglers using fly lures on unrestricted areas when compared to sample from fly-fishing-only areas. In other words, fly anglers did about as well against competition with bait anglers as when free from such competition.

East Branch Ausable River

This Essex County stream produced brown and rainbow trout in the sections studied averaging 8.7 inches in the creel census sample for the restricted area and 10.1 inches in the sample for the unrestricted area. Many fly anglers fish the West Branch and East Branch of Ausable, and the fly-fishing-only area on the East Branch very likely attracted special attention. In contrast to the other four stream samples, more fishing

was recorded on the restricted area than on the unrestricted (162¼ hours as against 87¾ hours in the sample representing 85 and 89 anglers respectively). Most of the trout enumerated in the fly fishing sample (197 out of 269) were released. While this gave a figure per hour of 1.6 for total trout, the figure for trout actually kept was 0.4 per hour. The latter figure was closely matched by 0.3 per hour on the unrestricted area. Only 16 out of 43 trout in sample from this area were released, the total success figure (kept and released) being 0.5 trout per hour. Large trout, over 12 inches, were scarce in this stream, more being recorded in the restricted area sample. Only 4 were taken in the unrestricted zone sample, giving a success figure of 0.05 per hour.

A very interesting observation was that, on the basis of 34 anglers (41¾ hours) fishing fly lures on the unrestricted area, success per hour for total trout was only 0.4 and for trout kept was 0.3. These fly anglers did not release most of the trout taken. On other streams a similar difference in behavior of fly fishing was not noted but, as already mentioned, the special fly fishing area on the East Branch evidently attracted a special type of fly angler.

The population samples made with electric shocker showed a total of 11 trout in the restricted area sample against 16 on the unrestricted area sample. All trout over 12 inches (only 3) were in the latter sample. Non-trout species, including suckers and several kinds of minnows, numbered 45 and 39 in fly-fishing-only and unrestricted samples respectively.

Bouquet River

This stream, also located in Essex County, produced brown, rainbow and brook trout in the areas studied. The size of trout kept averaged 8.6 inches and 8.5 inches in creel census samples from restricted and unrestricted areas, respectively. Many trout were released by anglers in this stream, using both fly and bait lures. A total of 57 anglers, fishing 108 hours on the fly-fishing-only area took 2.0 trout per hour, keeping 0.4 per hour, with no trout over 12 inches in the sample. A total of 81 anglers, fishing 163 hours took 2.2 trout per hour, keeping 0.6 per hour and took 6 trout over 12 inches (success figure 0.04 per hour). Figures for a sample of 18 anglers fishing 47 hours by fly lures in the unrestricted zone were: average size of trout 8.2 inches, 1.9 per hour caught, 0.3 per hour kept, 0.04 per hour for trout over 12-inch size.

Unlike the East Branch Ausable sample, the Bouquet sample showed no evidence of a large number of fly anglers having been attracted to the special area.

The electric shocker population study on the Bouquet showed 57 trout in sample from the restricted area and 29 from the unrestricted. This difference was mostly due to undersized rainbows, of which there were 34 as against 7. Non-trout species (including suckers and several varieties of minnows) numbered 14 and 41 for restricted and unrestricted areas respectively, counting only fish 4 inches and over in length.

Kinderhook Creek

Entering from Massachusetts, the Kinderhook flows through parts of Rensselaer and Columbia counties. This is a brown trout stream, and showed more large trout in both creel census and shocker samples than any of the other streams studied. A total of 13 anglers, fishing 24 hours on the fly-fishing-only area took 1.0 trout per hour, kept 0.7 per hour and took 0.08 large trout (over 12 inches) per hour. A total of 35 anglers, fishing 70½ hours on the unrestricted area took 1.1 trout per hour, kept 0.7 per hour and took 0.2 of the large trout per hour.

The samples taken with electric shocker indicated an excellent escapement of trout, the largest one taken being 21.2 inches. In the restricted area sample there were 67 trout, 5 being over 12 inches. In the unrestricted area sample there were 55, 7 being over 12 inches. Fish other than trout were numerous—206 and 288 in samples from restricted and unrestricted areas respectively. Suckers predominated, other fish including fallfish and several other species of minnows. This stream yielded three eels in the shocker study, one being 37½ inches long.

Willowemoc

This Sullivan County stream produces brown trout, and is a highly popular fly stream. The 110 anglers in sample from the restricted area, 374 hours of angling, took 0.7 trout per hour, keeping 0.2 per hour averaging 9.2 inches and took 0.02 large trout (over 12 inches) per hour. The 153 anglers in sample from the unrestricted area, 562 hours of angling, took 0.6 trout per hour, keeping 0.3 per hour averaging 9.1 inches and took 0.05 of the large trout per hour. Analysis of 42 anglers from this sample, using fly lures on the unrestricted water, checked very closely with analysis of catch on the fly-fishing-only area. The 42 anglers, fishing 167 hours, took 0.7 trout per hour, kept 0.2 per hour averaging 9.1 inches, and took 0.01 of the large fish per hour. Comparison of these figures indicates that fly anglers released a greater proportion of trout and took fewer big trout than anglers using other lures.

Investigation of this stream by use of the electric shocker showed 8 trout in the restricted area sample, and 14 in the unrestricted zone sample, with trout over 12 inches being 1 and 4 respectively. Non-trout species were numerous, with 162 and 410 in the restricted and unrestricted area samples respectively. Eels were found to be very numerous—57 and 29 in the two sections. Suckers, stone cats, fallfish and smaller minnows were also taken.

Wiscoy

Located in Wyoming County, the Wiscoy is a brown trout stream of productive, farmland type. Only 23 anglers, fishing 43 hours, were included in sample from the restricted area, with only three trout being enumerated. This sample is too small for accurate comparison. The figures, 0.07 trout caught per hour, 0.02 trout kept (8-inch) are probably not a true index of fishing success. Analysis of 5 anglers using fly lures on the unrestricted area gave much higher figures: 0.4 trout per hour, same for trout kept (average 11.9 inches) and 0.05 trout over 12 inches per hour. A sample of 11 anglers fishing 38 hours on the unrestricted area by all lures gave the following figures: 0.5 trout per hour, 0.3 trout per hour kept (average 11.9 inches) and 0.05 trout over 12 inches per hour. A sample of 11 anglers fishing 38 hours on the unrestricted area by all lures gave the following figures: 0.5 trout per hour, 0.3 trout per hour kept (average 10.7 inches) and 0.05 trout over 12 inches per hour.

Study of this stream by use of the electric shocker showed 29 trout in the restricted area and 39 in the unrestricted zone. Both had 3 trout over 12 inches. Non-trout species were 58 and 37 respectively, mostly suckers and several species of minnows.

Discussion

Viewed from the standpoint of management of brown trout fisheries on the five streams considered, it is necessary to assess not only the effect of special fly-fishing-only areas, but also the background conditions of each stream as bearing upon the possible need for such restriction. It may be a surprise to a lot of anglers (who perhaps were unsuccessful on many occasions) to note the rather large numbers of trout which

showed up in samples taken by use of electric shocker after the close of the angling season. Depletion by angling is certainly not complete, but this is of course a relative matter. Some streams are "fished out" more completely than others and many could stand a larger carry-over of big trout to help control competitive fish which, as shown by the shocker samples, are numerous.

Analysis of the figures indicates that fly fishing takes fewer large trout (over 12-inch size) than angling by unrestricted methods; also that the total amount of angling supported by a stream throughout the season is decreased when only fly lures are permitted. So far these results depend upon computations only; the actual fate of large trout saved by restrictions has not been determined. Some may migrate to unrestricted areas and thus provide a somewhat better average catch per unit of effort, while others may remain in the comparative sanctuary of the restricted zone. As to smaller trout —escaping by reason of decreased angling pressure or the growing tendency of many fly fishing specialists to return their catch to the water—their history is also difficult to follow. Whether they are actually saved in substantial numbers to the close of the angling season, or contribute to a better success ratio during the current season is not known. Slight changes would not be noticeable in a study of the type carried on. In general, fly anglers on unrestricted areas had about the same success per hour of effort as their brethren on the fly-fishing-only water.

Figures do not prove everything. Angling, being a sport for public enjoyment, must be considered also against the background of what anglers *think*. It is generally agreed that extensive "meat fishing" in the confined acreages of our trout waters is not possible under modern pressure of angling. Use of fly lures and the turning loose of most of the trout are commendable practices. Possibly the setting aside of special fly areas may have some educational value over and above the actual "management" value. As to the latter, the very extensive closure of waters to all lures except the artificial fly would certainly cut down on the total recreational facilities, there being many persons who do not use flies and many days (and times of day) when fly fishing is not attractive or productive. There are no immediate possibilities of setting up so many fly-fishing-only areas as to crowd the remaining open water, but there is a point here for future consideration. As a result of only one season of study, we can now indicate some of the results of this special restriction, but it still stands as an experiment rather than as a proven management method.

Looking to possible future trial, perhaps further restrictions on fly anglers are worthy of consideration—say a catch limit of only two trout per day, an increased size limit, or other obvious "penalty." So far the figures show that fly fishing as a method is not consistently less efficient per unit of effort than unrestricted fishing, including the use of natural baits. Some of the criticism that the setting up of special fly-fishing-only amounts to preference in favor of fly anglers as a class might be avoided if angling on these areas were definitely regulated by law so as to save as many fish as possible.

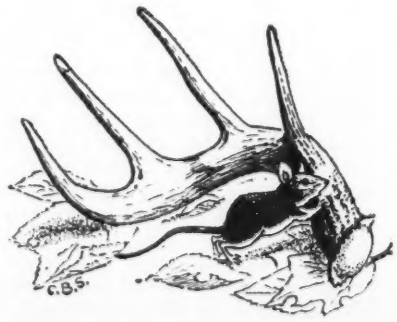
TAKING into account all available information, not only from census and population studies but also from the divergent opinions on the part of the interested public, the Department has decided to continue the fly-fishing-only experiment, making such alterations as may appear necessary for further testing of its success or failure. As we have attempted to indicate, an analysis based on a trial during one year has yielded much interesting information, but not enough for the formulation of a sound, long-range, management policy.

LEGISLATION:

THE coming session of the Legislature should, according to present indications, be a rather quiet one with no major controversial bills in the offing. But for some perverse reason, such quiet sessions have a way of developing unexpected fireworks. Old timers therefore refuse to go out on the limb with any general predictions as to what may or may not happen.

Not infrequently, the Department and members of the Legislature are taken to task by someone who feels that he should have had advance information about some particular bill introduced during the session. While whatever happened may have been in accordance with normal legislative procedure, he nevertheless feels that somehow there was some skull duggery or some element of surprise. So perhaps a word of explanation as to how Conservation Legislation originates will lead to a better understanding of the unpredictable legislative process.

There are, of course, a number of agencies which regularly propose Conservation Legislation. They include the Conservation Department, the New York State Conservation Council (representing the sportsmens' clubs and federations throughout the State), and the Conference Board of Farm Organizations representing the major farm organizations. In addition, legislation may come from any one of the individual clubs or conservation organizations which may or may not be affiliated with a parent organization. Or it may originate with any one of the 56 Senators and 150 Assemblymen acting on his own, or through his sponsorship of legislation from any one of his local authorities or individual constituents. More about this later.



Bills may be introduced rather promptly in the early part of the session (which is usually the case with bills which have been planned long in advance) or they may be introduced anytime during the session up to the date which the Legislature sets each year as the last day for the introduction of bills.

There are some problems which it appears now may come in for legislative consideration and a quick though incomplete listing of some of these may be helpful in developing some worth while thinking in advance of the session:

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FISH AND FISHING: *Size Limits*—The Conservation Council had passed a number of resolutions at its Watertown convention which bear on size limits. One is to give the Department the authority to increase or decrease size limits especially on bass in any body of water where such a change is indicated for management purposes.

It might be noted that reduced size limits on bass in certain overpopulated waters where stunting has occurred has had benefits. A second resolution would give the Department authority to set the size limits on brook, brown and rainbow trout in the Forest Preserve counties. The Council had struggled with this general problem for a number of years and this new and somewhat more flexible approach is designed to meet an admittedly complicated situation. A third one would require that nearly all of the size limits now prescribed for marine fishes which at present apply only to commercial fishermen, would apply to sports anglers as well.

New York Reservoirs—The Council also seeks to give the Department authority to manage fishing in the New York City reservoirs as a conservation measure.

Striped Bass—It is understood that legislation will again be introduced which will make it illegal to take striped bass by means other than angling—not on the basis of conservation considerations, but from the economic and social points of view.

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FIREARMS: Thought is being given to the law which now applies only to Rockland County which provides that there shall be no shooting across highways. It is said that this law has worked out well there and that its extension on a State-wide basis may help to reduce hunting accidents. It has also been suggested that a new law be enacted providing for no hunting within 500 feet of any dwelling—as a combination safety measure and as a gesture of consideration to farmers and other landowners who are good enough to permit hunting. A further suggestion would make it explicit that automatic guns (not semi-automatic—but the machine gun type) would be illegal not only for game which is presently provided for in the law, but for all hunting as well, even if it involves non-protected game such as woodchucks or foxes.

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WILDLIFE CONTROL: It is expected that the Wildlife Control Committee, composed of representatives of sportsmens' and farmers' organizations, will recommend the extension of legislation which will allow the management of the deer herd through the harvesting of antlerless deer where the deer population is too large and deer control is needed.

Consideration is being given to making it legal for landowners to take raccoons out of season when they are damaging property—as is presently provided in the law for some other species. Some people also feel that all protection should be removed from raccoons in those counties which are certified as having rabies—on the basis that the raccoon has now been demonstrated as an important vector of this disease.

A great many people are still much concerned over the uncontrolled domestic cat, which is known to take a heavy toll of small birds and mammals. Under the present law cats are given a most unusual degree of protection. They may not be taken unless they are found with some protected bird or mammal. Since it is impossible to question a cat about his quarry, or to identify any small bird in the mouth of a cat, this means that they are accorded virtually one-hundred per cent protection. Although cat lovers are legion and any proposed legislation affecting cats is bound to touch off a great controversy, conservationists generally feel that landowners at least should be given some legal way of dealing with stray cats which continually hunt their lands. There are also unsolved problems in regard to the control of wild and semi-wild dogs, or dogs which are habitually permitted to run at large and to hunt every day in the year.

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DEER HUNTING: The Department as usual will put in a bill perpetuating the regular buck seasons, since such seasons are enacted year by year. Various suggestions may come from different parts of the State for amendment to these seasons—but what they may be is not known at this writing.

In collaboration with the Council, the Department will again attempt to provide for a license display tag to be worn on the back of big game hunters —similar to the one provided for in Pennsylvania and many other states. An attempt will also be made to provide for a simplified procedure for the return of license stubs, reporting the taking of big game.

A suggestion has also been made that the law be amended to provide for a combination archery and big game license. At the present time archers pay $5.25 for a special archery license which entitles them to take a deer of either sex and a bear during a 14 day period prior to the gunning season, and which an archer may continue to use throughout the buck season for bucks only. In view of the high price of this license, it has been suggested that if an archer is unsuccessful in getting a deer during the special archery season, he should be permitted to hunt during the regular buck season with firearms. He would still be paying a $3.00 premium over and above the big game license, which costs $2.25.

Speaking of the archer: it has also become clear that the law must make some definite provision as to the type of hunting arrow which can be used for big game. The Department will attempt to work out such legislation in collaboration with the archers, to the end that only arrows which will permit a good clean kill be allowed.

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TRAPPING: As previously described in THE CONSERVATIONIST, there is a need to change the law so that the Department can prescribe a trap larger than the present six inch limit for the taking of beaver and otter. The present restriction results in the crippling of many animals, which nevertheless escape.

It has also been suggested that the law permitting the shooting of muskrats on Lake Champlain should be repealed.

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FORESTRY: It has been suggested that there should be legislation designed to compel the control of burning sawdust piles, which in some areas represent a more or less constant menace.

Another fire fighting problem is posed by the fact that the law limits the grade of pay for fire fighters to fifty cents an hour, and for fire wardens and foremen to seventy-five cents an hour. These rates are so far below prevailing wages in this State, and so far below the rates provided for similar work in other states that it is felt that some increase should be made possible.

WHEN the session is over, there will have been many other suggestions dealt with and some of the foregoing matters may not come up for consideration. In addition, the Department annually has a number of bills not listed here which simply bring about technical corrections in the law or extend statutes which are on the books for limited periods.

As was indicated at the outset, the matter of Conservation Legislation is a very democratic process. For that reason, we would be glad to hear from anyone who has what he feels to be a suggestion which will meet some real conservation problem. However, sending a legislative suggestion to the Department does not mean that legislative action will take place. The normal procedure is to take up proposed amendments with your local Legislator, who will make sure that they are properly prepared and processed.

THE BACK OF THE BOOK

SCATTERSHOTS AND DEPARTMENT ACTIVITIES

GAME PROTECTOR EXAM.

The examination for Game Protector, which was to have been held on November 22, 1952, has been rescheduled for March 14, 1953. The examination will be on a State-wide basis, by counties, and a separate Civil Service list will be established for each county. At the present time there are vacancies in Cortland, Greene, Oswego, Otsego, Rockland, and Tompkins counties.

The lists resulting from this examination have a term of four years (unless they are used up before this term expires) and will be available for use as vacancies occur in various counties of the State.

For complete details regarding this examination we suggest that you write to the State Department of Civil Service, Albany 1, or to the Personnel Office of the Conservation Department, Broadway Arcade, Albany and ask for an exam. announcement and application.

PLANTING HUNTERS

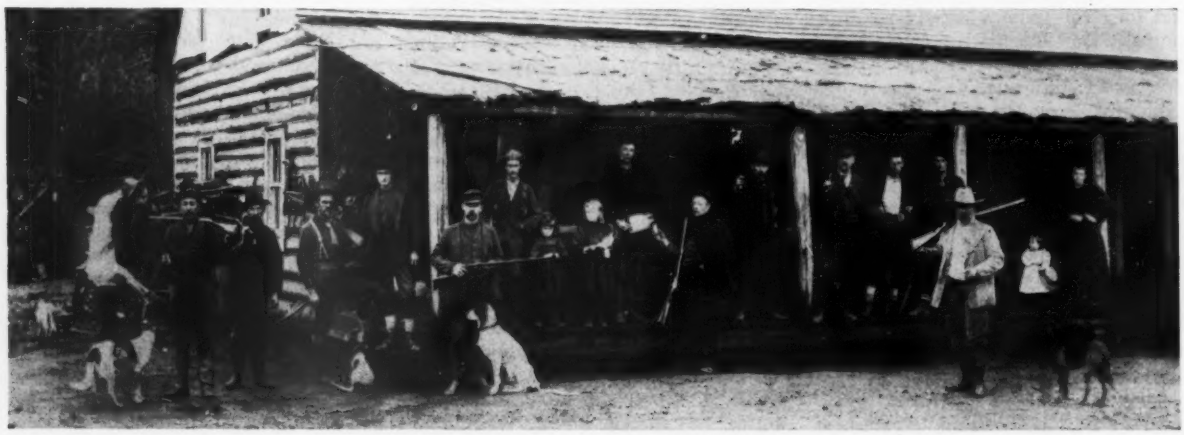
Virginia hunters, purchasing their licenses this season are being handed small packets of pine seed for fall and winter planting, and asked to help reseed their hunting grounds.

The Virginia Forest Service has distributed the packets to the license issuing agents. "While in the woods, in open places on good soil where shade is not heavy, scrape away the leaves on a place as large as your hat," the printed message on the envelopes says. "Drop two or three pine seeds and press in the ground with your foot. Next spring a new pine tree may start growth. The owner of this land will appreciate your thoughtfulness. . . ." On the back of the envelope is a fire prevention message.

FOR VETERANS

As with all publishers, there are returned to this office magazines that cannot be delivered by the post office due to change of address. These, plus a slight over-run each issue, build a small backlog of magazines that are in good condition.

We have instituted a policy of mailing part of this surplus to all VA hospital librarians in the country—whenever we have a supply available. Judging by the letters we've had, this has been a most worthwhile experiment, and we will continue it as long as we have the magazines. We feel they're going to the right people.



SPECULATOR AGAIN: Camp Perkins, on the road from Speculator to Indian Lake, with Mrs. Isaiah Perkins on right. About 50 years ago.

Sandhog Beaver

Non-union carpenter boring from within N. Y. C. Water System

A NEW YORK CITY Water Board Inspector met a Safety Engineer at the top of a shaft leading to a tunnel 165 feet below the site of the Downsville Dam (in Delaware County; the reservoir will be part of the city's water supply system). The Inspector removed his helmet and spoke to the Engineer: "You have a Carpenter down there who does not belong to the union and refuses to wear a helmet."

The Engineer started for the elevator bucket. "Come on," he said. "Show him to me. He'll wear a helmet and like it."

So the Inspector accompanied the Engineer in the bucket to the bottom of the shaft and walked a few hundred feet to the end of the tunnel.

Now then, to build the Downsville Dam, the East Branch of the Delaware River was diverted under and around the site of operations through a tunnel 40 feet in diameter cut through solid rock a distance of half a mile. When the dam is completed the huge tunnel will be blocked with a plug of concrete at a point about midway from either end. To regulate the flow of water below the dam in the river (as required by agreements with the States of New Jersey and Pennsylvania) a small tunnel 7 feet in diameter and about 500 feet long has been drilled around the proposed plug. Mid-way in this small tunnel a chamber 40 feet in diameter and 100 feet long has been constructed to house the valves, meters and other mechanisms. The intake of the small tunnel is at present some 15 feet above the flow line in the larger tunnel, while its outlet (because of the slant of the large tunnel with a 75-foot deep stilling basin at the lower end) is nearly at water level. It was to this point that the Inspector was taking the Engineer to discipline the unruly Carpenter.

"There he is, grab him. Oh-oh—too late!" said the Inspector. There was a splash and the two men watched a beaver slip into the water with a slap of its tail. The plank walk covering the slippery rock had been chewed in several places.

"Can't do much with that guy," said the Safety Engineer, and the two men left the tunnel. But the word spread quickly, and anyone with a shadow of an excuse soon had business in the tunnel.

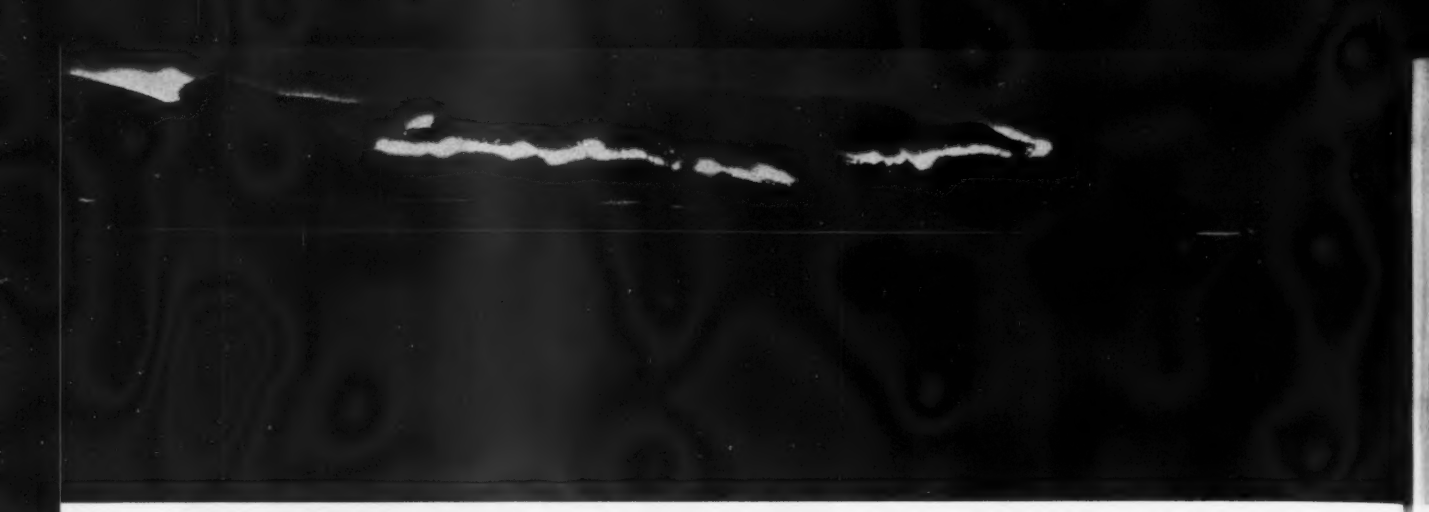
In the contractor's office each man knew a different Game Protector, and before long four Protectors arrived at the Dam. Protector Harry Dingee of Hancock, who had been having some trouble with beaver damaging private property in his bailiwick, brought along some of his large live traps.

The Protectors reasoned that the beaver had entered the tunnel through the upper end and did not dare go out the lower end because of the distance he would have to travel under water, and also because of the surge and pressure of the water in the stilling basin. And they doubted if the animal could get out the way it entered because of the swiftness of the current and the smoothness of the concrete—which afforded no footholds.

The live traps were set and baited with popular twigs and placed where the planks had been chewed. Each morning for several days one or two Protectors were on hand to check the traps; each time they were sprung, but no beaver. A little questioning revealed that the workers in the tunnel were most fond of this bit of wildlife and were trying to feed it everything from brush to ham sandwiches. Furthermore, they were afraid it might be harmed by the trap, so just before quitting time the traps were sprung.

Tired of playing this game, one of the Protectors reset and rebaited the traps late one afternoon and waited to come out with the last group of workers. And the next morning, there was a beaver in one trap. Workers flocked to the end of the tunnel and flash bulbs popped to record the fact that a beaver had been trapped 165 feet below the surface of the ground. Only the beaver took it calmly. Protectors Burgin and VanBenschoten took the trap with the beaver in it to the top of the shaft, where more workmen gathered and more pictures were taken, and from there to the contractor's office for the office help to view. Then a very happy beaver was released in Launt Pond on the Bear Spring Game Refuge. To show its pleasure the beaver dived and surfaced a dozen times in 50 yards.

—BRYAN BURGIN, *Game Protector*



FOREST FIRE: Breakneck Ridge and Sugarloaf Mt. photographed April 21, 1952 from across the Hudson. Streak is N. Y. Central train

PANTHER

Another panther has been laid to rest. It took a long time, but the job has been done.

In late May, State Police near Oneida were notified of the presence of a panther in the vicinity. One of the local residents informed the authorities that he had heard what sounded like a woman screaming, and the noise lasted about 15 minutes. Later one of his neighbors reported that he had seen the panther—and the hunt was on.

We couldn't say for sure that it was the same beast, but a panther finally succumbed to a shotgun blast near Spinnerville on October 17. An extensive hunt had been organized for it, somebody teed off at it with a shotgun, and the animal was finally found dead near a woodchuck hole. The carcass was carried down to the headquarters of the county dog warden and it measured 30 inches from head to tail.

According to the *Utica Daily Press*, "it was a black house cat that got fed up with the city and went wild." Well, you can't blame it—things are tough all over—but if we had more contented cats we'd have fewer "panthers." The last authenticated beast of this species was killed in our State half a century ago.

MECHANIZATION

The performance of a Power Wagon, one of the latest pieces of equipment our Bureau of Forest Fire Control has acquired, was demonstrated recently on a 6-acre fire at Clark Hill, Town of Western, Oneida County.

Ground cover was a heavy matting of dead hay and grass, although some parts of the fire were composed of heavy dead weeds and brush. The fire was almost circular in shape, with the head very wide and very hot, fanned by a 10- to 15-mile-per hour wind. Attempts to cool down the head of the fire with Indian pumps were of no avail, as the fire was too hot, the flames too high, and rate of spread too fast.

The Power Wagon, using a ¾-inch hose and slip-on unit built for the Department at the Wallkill Prison, circled the head and snuffed out the fire in a matter of minutes, accomplishing a job that might have taken many men with hand tools a long time to do. And not only did the Power Wagon prove itself against the fire; it kept moving without getting bogged down and hauled out a one-ton pick-up truck stuck in a soft spot. Like almost everything else, fire fighting is going "mechanized."

MORE ABOUT SHOCKERS

Memo: To Pete Fosburgh
From: J. R. Greeley
Re: Short for "Conservationist."

Supplementing the article "Shocking!" by David C. Haskell in our preceding issue: First, we passed up an opportunity in this article to mention that the 1952 special investigation aimed at improvement of this electric apparatus for use in biological studies of fish populations was made possible by Dingell-Johnson funds (Federal Aid to Fisheries). While not a final report on this project, the article is the first information resulting from the study, embracing also much previous background work by Mr. Haskell.

Second, in view of much interest in the development of electric shockers, and in view of the fact that spectators are often on hand to see Departmental crews actually operating such apparatus, we want to emphasize that electricity and water make a dangerous combination. Spectators must be careful to keep away from generator and wires. All studies using such apparatus for the purpose of finding out useful facts about fish are not only covered by collecting permits, but are supervised by a trained operator.

BEAVERS AGAIN

We are indebted to Game Protector Russell Gordon for the following excerpt from the *Gowanda News:*

"The local staff of the New York State Electric and Gas Company celebrated the organization's 100th birthday by piling out of bed at 3:30 Tuesday morning to repair the damage done by a colony of beavers near South Dayton.

"Webster says the beaver is a rodent noted for its ingenuity in damming. It is reported there was some damning going on among the seven men on two trucks who pulled out on the emergency call in the wee hours.

"The beavers, working in the swamp between Fairplains Road and South Dayton, were building a dam. They selected a tall poplar tree to work on near the power line that cuts across the swamp, but the usually astute woodsmen let the tree fall in the wrong direction; it broke the high power line. Lloyd E. Marriott of the local office said power was disrupted in Dayton, South Dayton, Gowanda and Angola. The men soon located the trouble and cut in another line, finishing up about eight a.m.

"They also found another tree in the swamp near the line that the beavers had cut half way through. The men finished the job with an axe, felling it in the right direction. Both trees were about eight inches in diameter."

RESCUE

THE afternoon of Friday November 7, 1952, Forest Ranger James L. Lawrence was returning from South Canada Lake, where he had been checking campers, to his headquarters camp at West Canada Lake. When about a half mile away, he coughed and immediately felt a sharp pain in his stomach, due to an ulcer which had probably just ruptured. After resting a while, he walked the remaining half mile to camp, fairly comfortably. He told his wife that all he wanted for supper was boiled eggs, toast and canned milk. He ate a little of the egg and immediately suffered severe stomach pains, which it is thought were caused by the salt and pepper on the eggs just swallowed. From then until 4 A.M. the next morning, he was in severe pain.

The Conservation Department built and maintains a 22-mile telephone line through solid woods from West Canada Lakes to Speculator. Over this line, Mrs. Lawrence called Clyde Elliott, a seaplane owner and pilot at Speculator, to come in and take out Jim to Dr. Fiero, also of Speculator. As it was then about dusk, foggy, and snowing, Clyde had to tell her it was impossible to fly at that time.

Clyde immediately called Halsey Page, the Forest Ranger at Speculator. Halsey called West Canada to get the story first-hand and decided it was necessary to carry Lawrence out on a stretcher that night. He called seasonal ranger Robert Barton at Cedar Lakes (8 miles from West Canada) to take his 3-man trail maintenance crew to West Canada Lake, and to prepare to carry Lawrence out. There was also one other trail man, T. F. Clark, Jr., at West Canada to help. Page also told Barton that he, Ranger Ed. Broland, and one other man were starting by jeep for Cedar Lakes and would wait there for a phone call on Lawrence's condition when Barton and his crew arrived. Barton took a boat 4 miles up Cedar Lakes and walked the remaining 4 miles. Page got to Cedar Lakes over a tough jeep road just before Barton called and said that Lawrence was in no condition to stand being carried out. Page and Broland then started for West Canada by jeep over a foot trail and drove to within 3 miles of West Canada Lake. No jeep had ever been beyond Cedar Lakes before this. They left the jeep and walked the remaining 3 miles, arriving at 1 A.M. with snow up to their knees and found Lawrence on his stomach, propped up by pillows and cross-wise on the bed, as this position caused him less pain.

Ranger Jim Lawrence, E. Chester Gersten and Pilot Clyde Elliott—in happier days.

Page and Broland continually watched the weather and about 3 A.M. it began to clear. If it hadn't cleared, they were going to carry him out in sitting position in an improvised barber chair-like rig. Halsey Page had had experience with this before, when a man could not be carried in prone position.

They called Clyde Elliott at Speculator, and he said the weather was clear in Speculator too at the moment. In 15 minutes, Clyde was in the air, even though he had to winch his plane out of his hangar. He left his jeep lights shining on the lake to guide him back to his hangar. In 15 minutes, he circled West Canada Lake and with the aid of a clear sky, three men with flashlights at the dock, and a brisk west wind, he landed. The wind direction was just right and was a help. The lake was choppy but not unduly so. On the way in Elliott ran into a snowstorm over Pillsbury Mt., and had to "detour" by way of Spruce Mt. (all this at night). Jim Lawrence, propped up by two men, walked to the plane, and minutes later was in Speculator. Dr. Fiero was on hand to give him a hasty check. Clyde Elliott then drove him the 54 miles to Amsterdam in one hour.

Dr. Spence, who had been called by Dr. Fiero, operated immediately and repaired a perforated ulcer. Jim Lawrence returned home from the hospital, November 19th, and had lost only five pounds through the ordeal. He is on his feet, but will not be able to work till after Christmas. Jim says that if he ever shoots at a buck, he will try to avoid the stomach, as he would not want to cause the suffering which he went through.

—F. E. FOHRMAN, *District Ranger*

Note: The pilots at Eagle Bay and Inlet were alerted, but the weather did not clear up there or I'm sure that they would have flown in also. Fifteen minutes after Elliott took off, the weather closed in, and it snowed hard.—F.E.F.

RABIES

During the month of August the campaign to reduce fox populations by the Wildlife Rabies Control Program produced several new records. The old record of 108 fox taken in one month, consisting of 25 days, was set by Robert Bliss in 1949. In August of this year, however, several rabies control trappers smashed this record. Elmer Gleasman of Boonville, trapping in the Townships of Hornellsville, Howard and Fremont in Steuben County, took a total of 143 fox in 25 working days. Howard Parish of Fayette, during his 25 working days, was close behind with 135 fox taken in the Townships of Alfred, Ward and Amity in Allegany County. Through the efforts of these and other trappers a total of 1,179 fox were taken by the program during August. This marks a new record—the largest take in one month since the program was initiated.

To us this indicates that fox populations in the Steuben-Allegany area were very high. It also points out the effectiveness of our professional trappers in reducing these populations. But since the success of the Wildlife Rabies Control Program is measured by whether or not the spread of the rabies virus is halted—and not by the catch size—we cannot assess the true value of these efforts for several months.

FPA NOTE

One of the newer Forest Practice Act co-operators in Dutchess County is Lowell Thomas, who has signed up 1,000 acres of plantations and hardwood forest in the Pawling area. The plantations constitute some of the more extensive older plantings with twenty-four growing seasons up to the present. Norway spruce predominates, with red and white pine following in that order.

REARING POND

Hendrick Hudson Fish and Game Club's bass rearing pond, near Troy, has temporarily "given up the ghost;" however, eleven Rensselaer County lakes have benefitted by 72,157 fish—29,952 bass, 35,505 bullheads, 2,800 yellow perch and 3,900 blue gills.

This first large netting since 1948 was conducted under the direction of Special Game Protectors Nicholas West and Lorrell Cook, both members of the Club. Four trucks, two with oxygen tanks, and other necessary equipment were used to transfer the fish.

In order to do the job it was necessary to drain the pond to the lowest possible level. Now it will be relieved of the remaining fish, and allowed to remain drained to give the pond a chance to winter-kill the vegetation. The ditch on the lower side of the drain pipe will be blasted out and next year hummocks, tree stumps and fence posts will be pulled out to improve the pond bottom for future netting operations.

Bodies of water whose fish populations were increased by the operation include Snyders, Mud, Little Bowman, Electric, Glass, Crystal, Crooked, Burden and Racquet lakes, Oil Mill Hill Pond and Frear Park. The last two got the perch and blue gills, the rest the bass and bullheads. Expenses of the big undertaking are being borne by the Club.

BACK ISSUES

Some previously printed issues are still available and can be purchased at this office for twenty-five cents each. They are as follows:

April-May 1949
June-July 1949

June-July 1950
August-September 1950
October-November 1950

February-March 1951
April-May 1951
June-July 1951
August-September 1951
December-January 1951-52

February-March 1952
April-May 1952
June-July 1952
August-September 1952

We do not have bound volumes for sale. Any other issues not listed are now out of print. However, reprint copies of certain articles are available without charge.

Hop

If Arthur S. Hopkins, when he retired as Director of Lands and Forests on October 1, 1952, had arranged to take a trip that he might have planned on for a long time, or had moved to Florida, or had just decided to take it easy and reflect on a full and active life, he would have been following the established pattern. But to do that would have been completely out of character for "Hop." Technically, he has retired. Actually, he is setting out to conquer new fields in his profession by taking on the job of Executive Secretary of the Northeastern Interstate Forest Fire Protection Commission.

"Hop" originally entered the service of the Conservation Department as a Forester in 1914. He had previously been employed by the U. S. Forest Service and several private concerns following his graduation from the Michigan School of Forestry. His employment in the Department was continuous until his retirement except for a brief period in 1926 and for military service in World War I, when he served in the Aviation Section of the Army Signal Corps, and in World War II when he served as Budget Director in the North African Theatre of Operations for the American Red Cross. In 1927, he was promoted to Assistant Director of Lands and Forests, and following the death of William G. Howard, Director of Lands and Forests, in 1948, he was promoted to Director.

During his public service career, Mr. Hopkins distinguished himself by the excellent combination of skills which he possessed as a forester and an administrator. His ability to plan and execute the programs that were his responsibility was outstanding. For example, he was in direct charge, for many years, of all the land acquisition programs of the Department. These included the acquisition of some 600,000 acres of Forest Preserve land, purchased from bond issues provided in 1916 and 1926, totaling $12,500,000 for this purpose; the acquisition of over 650 miles of public fishing right easements, and land for public campsites, game farms and fish hatcheries.

A major program in his charge was the enlarged reforestation program which involved the acquisition, planting and development of about 500,000 acres of abandoned and idle farm land. These lands, which are outside of the Forest Preserve, are today known as State Forests, many of which have reached a stage of development so that they are producing marketable timber.

Following the storm of November 25, 1950, Mr. Hopkins organized and directed the salvage of some 250,000 acres of blown-down timber. This work, which is still in progress, involved the letting and administration of 139 timber salvage contracts. Measured in loss of timber, the blow-down is bad enough but the forest fire hazard that it created was and is even worse. An important part of Mr. Hopkins' work in this field was the organizing of a specialized forest fire control program to protect the affected areas against fire. This particular phase of the work required close co-operation with the Northeastern Interstate Forest Fire Protection Commission and the use of its program of specialized training for the suppression of large fires (in the trade, they're called "campaign fires").

This Commission was created following the wave of serious forest fires that occurred in 1947 to provide a system of mutual aid and assistance among the northeastern states for any future fires of disaster proportions. "Hop" was one of the guiding lights in the establishment of this Commission (which includes New York and the New England States) and served as Vice Chairman of it since its organization. Serving as its Executive Secretary, he will now direct all of his energies to the work of this Commission, and if the time ever comes when the plans and resources developed by it are needed to combat a "campaign fire," a lot of people can be very thankful that "Hop" had the energy, foresight, and drive to bring the Commission to the point where it would and could prevent future disasters such as—well, remember Bar Harbor?

—W. E. TINNEY

CAMPSITE CONSTRUCTION FOREMAN

SALARY: From $3,571.76 at time of appointment to $4,372.16 in five annual increases. This salary range includes the present cost of living adjustment.

CIVIL SERVICE STATUS: Competitive Civil Service. Personnel recruited by means of open-competitive examination. POSITION: (Number and Location): There are four positions in this title; one each at Northville, Lake George, Saranac Lake, and Catskill.

PROMOTION OPPORTUNITIES: Employees may qualify for the higher grade position of Principal Park Superintendent. WORKING CONDITIONS: Majority of duties performed out-of-doors at public campsites. Basic work week is 6 days and 48 hours. Employees earn 24 days vacation each year and one day of sick leave credit each month. Unused sick leave is accumulative to a maximum total of 150 days. Reimbursement is made for expenses incurred on official business.

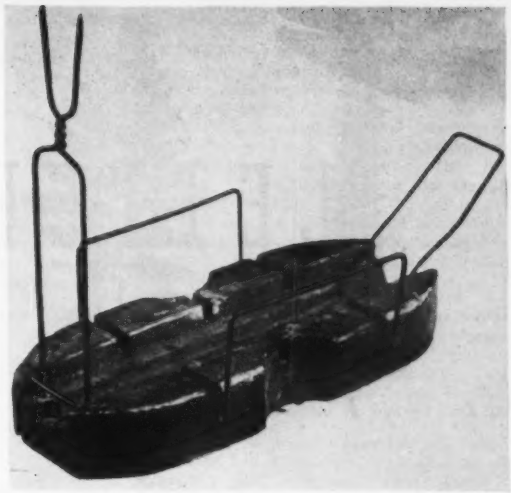
RETIREMENT: Membership in Retirement System compulsory. Employee contributes on a payroll deduction basis. Variety of retirement benefits are offered.

DUTIES: Under general supervision of the District Forester, has charge of the development, maintenance, and operation of public campsites, trails and other forest recreation facilities within a forest district embracing several counties. Supervises the repair and improvement of public campsite facilities. Supervises the seasonal personnel employed in the operation of public campsites and other recreational facilities. Maintains records of work performed, requisitions, payrolls and prepares reports as required.

QUALIFICATION REQUIREMENTS: *Physical*—Good physical condition and freedom from any disabling mental or physical defects. *Education*—Graduation from high school or equivalent education. *Experience*—Four years of satisfactory experience in park or forest recreation maintenance and general construction work of which two years must have been in a supervisory capacity. *Note:* Graduation from a recognized Ranger school may be substituted for one year of the required general experience.

SPECIAL KNOWLEDGES AND SKILLS: Good knowledge of general construction and maintenance work. Some knowledge of forest recreation. Ability to plan and direct the work of others. Ability to meet and deal with people. Possess industry, good judgment, resourcefulness, thoroughness, tact, and initiative.

NEXT ISSUE: *Forest Fire Observer.*



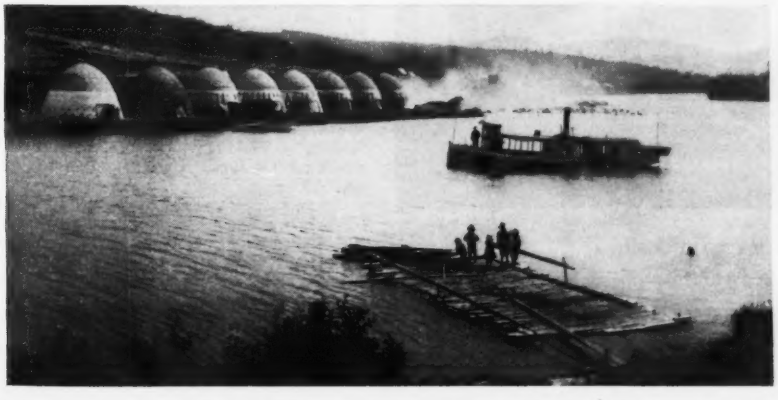
NO, IT'S NOT A TRAP: It's to make a decoy out of a dead duck, with wires to brace neck and head, wings and tail.

DEER MANAGEMENT

Michigan's Department of Conservation has been given authority to manage scientifically its "lower peninsula" deer herd for a three-year period. The Wildlife Management Institute reports a special hunting season has been set to harvest antlerless deer in areas where they are overabundant, but Michigan's wildlife administrators suspect it may take several years to bring about a proper balance between deer and food supply.

Doe deer from overstocked (and consequently overbrowsed) areas were found to bear only one fawn each year, but does from areas where a proper balance exists between the deer population and the food supply average two fawns annually. Three-year-old bucks from depleted ranges average fifty pounds lighter in weight than animals of similar age from a properly stocked range. And bucks from the overstocked areas grew smaller antlers, with fewer points.

SPEAKING OF CHARCOAL: Kilns at Chateaugay in the old days



BEAR vs BURRO

Two Albany boys who acted as Hutmasters at the Adirondack Mt. Club's lodge five miles up the Johns Brook Trail from Keene Valley had quite a surprise one night recently. A great hulabaloo woke them in the small hours of the morning and investigation disclosed that a big black bear was attempting mayhem on "Nubbins," the burro used for packing in supplies.

The biggest animal these boys had ever seen outside a zoo being a rabbit, this was a pretty disconcerting experience. The same for the burro.

LETTERS TO THE EDITOR

FRENCH LOUIE

Dear Editor: Enclosed you will find an article on French Louie written by my father, Elijah W. Conklin, last December (1951) in his 90th year. This is a personal account of what he learned about French Louie.

F. E. Brimmer, sports magazine writer and School Superintendent, my son, George, and I made the trip to Louie's camp and it was worth the climb. The cabin was 12 by 12 feet and had a small lean-to made of spruce logs. It was built up against a huge rock that projected into the camp. The rock, heated by the stove, provided extra warmth in cold weather and coolness in the summer time. The roof was made of spruce shakes 2 feet long and 10 inches wide. The floor was made of split spruce, the logs planed smooth.

The camp was only seven feet high, as French Louie was a short man. We saw a large six griddle stove in fine condition in the camp. His bed was the strangest; it was a 10-foot guide-boat, square at both ends and hung on chains at each corner from the roof. It was filled with hen, partridge and duck feathers. At the head of the bed, a square hole was cut with a wooden plug in it. He shot deer from there at a deer lick outside—a stump with salt in it about a hundred feet distant. In the lean-to was a huge pile of empty jugs and bottles as he was a hard drinker, living a hard and lonely life.

We found some trousers hanging on the wall. You could not tell the original cloth because of the patches.

Below the camp was a garden 100 by 50 feet. The lower part had a three-foot retaining wall to make it level. He filled this with black muck from a swamp nearby and here he grew potatoes.

Below the garden on a bench or lower level was his maple sugar house, 24 by 16 feet, with open sides. There was a sugar sap pan, 6 by 6 feet and a trough sap line about 400 feet long, to the center of a grove of maple trees. His sap buckets were made of birch bark, about a hundred of them in a little shelter. The wooden pins were pulled out and they were piled in a flat. Made into buckets, the four sides were turned up and pinned at each corner with the wooden pins. The sap ran into a 50 gallon barrel in the sap house, which was the most perfect carpenter work I ever saw, made with only an axe, a smooth plane and a slick.

His trapline was about 50 miles long starting up Otter Brook. He had overnight camps every ten miles. They were bark shelters 7 feet by 3 feet with a sheet iron stove, frying pan and tin pail in each one. His route was up the Otter, around Kitty Cobble Mountain, to Twin Ponds, over to West Canada Lake to Brook Trout Lake, down Wolf Creek to Indian River, Indian Lake, Squaw Lake, Falls Pond, down Falls Pond Outlet. He had a halfway camp on Samson Pond. Also, there was a guide-boat on each lake.

In the spring, French Louie brought out his winter's catch of furs by sled on snowshoes to Old Forge and took back his summer supplies. Then he made his maple sugar.

He was a rough looking man. He was the one who killed the last of the timber wolves in the Adirondacks. He killed five on Samson Lake. They killed his dog and he put arsenic in a doe's carcass and killed all five.

Rebecca L. Conklin, Olean

GUINEA HENS FOR SPORT AND DINNER

Dear Sirs: This picture was taken in the Nineties at the head of Irondequoit Bay. At that time, a man by the name of Westfall used to liberate a lot of guinea hens which became wild. Every fall there was a hunting party.

You will notice the hammer guns. The second man from the right with the ammunition belt is my father, Dr. Henry T. Williams. Mr. Edward Watson, a gunsmith from Rochester, who has been associated for about sixty years with hunters, could identify some more.

Dr. Henry Ward Williams, Rochester

KILLER

Gentlemen: We read with great interest Mr. Huber's "Let's Kill Trees" in the June-July *Conservationist*. We tried every farm store we know of but could not find 2, 4, 5-T.

Then the Dow Chemical Company ran almost a full page ad in the "Country Gent'emen." We wrote them asking where in the vicinity of Syracuse we could buy their brush killer or if we should order it direct. Unfortunately, they never cared to answer.

I'm enclosing a stamped envelope. If you can tell us what other companies manufacture 2, 4, 5-T and where we can purchase it we shall be very grateful. We're anxious to get started on some of the brush that is crowding out our reforested evergreens.

Mrs. T. S. Harmon, Jamesville

● *In your area, contact The Credle Equipment Co., 309 Genesee St., Syracuse.—Editor*

A GOOD SUBSCRIBER

Dear Sir: Enclosed you will find a dollar for a one-year subscription to be sent to Assistant Scoutmaster of Troop 50, Troy, c/o Mr. Ken Pascoe for the use of the Troop. I read his little article (page 39 of the last issue), "One Man's Meat," and I know they will enjoy the magazine.

Am also enclosing a clipping which may be of interest. (Below).

Larry Hickey, Cooperstown

SOUND SHOOTING—OLD AND NEW

Sound shooting may not be what the title leads you to think it is. Bitter experience has proven that too many jaspers these days own a rifle that they can load on Sunday and shoot the rest of the week without reloading. Along with this handy little gadget, they have a complete and utter lack of common sense the minute they get off the pavements and away from the TV Grill and into the country. Having paid their license fee, they're going to get something to show for it, animal, vegetable, or mineral. They do it with a weird exercise in ballistics known as "sound" shooting. That is, they hear a noise in a clump of manzanita or blue-brush, a thicket that they can't see through with a flame thrower, so they haul Old Betsy up and let her fly. Then they make a leisurely investigation to see what they hit; whether it's something to take home, or dig the bullet out of so the ballistics experts can't convict them. This is what the current crop call "sound" shooting. In the old days, when your partner went out for camp meat, if he shot once, you said "Meat!"; if he shot twice, you said "Maybe?"; if he shot three times, you got your gun and went hunting yourself.

—*Old Hutch*

(From Zane Grey's Western Magazine)

TO THE MAYOR

October 19, 1952

Mayor Impellitieri, New York City

Dear Sir: It will most probably astonish you to get a letter from the wilderness of Manitoba. However I don't see another way of contacting the right person I am looking for. Please excuse me taking this unusual way.

I am a Dutch settler, former regular Army officer disabled in the last war, student of the University of Sorbonne and Cambridge, now teacher and rancher in the Mid-west of Canada. I settled here in the spring of 1951, built myself a nice new bungalow, teach here amongst the halfbreeds and started ranching to make that my future profession. In one and a half years I did a lot and the beginning has been a success.

However, there is one setback for me and my family I can't overcome, and that is the impossibility of meeting once in a while civilized people with fresh ideas or at least with another outlook upon life.

My bungalow has a spare sitting room and sleeping room and I live in the middle of wild life with plenty of ducks and deer and other game. On the map of Canada near Waterhen Lake—top of Lake Manitoba.

Is there not a hunter who likes to change his hunting grounds and try up here?

It is not the idea of getting money out of one or another well-to-do American. Money for food taken during their stay is sufficient as I am not what you call wealthy. But for the rest, they can stay without any charge.

I direct this letter to you as the Mayor of the oldest Dutch settlement in the States hoping you may be able to direct it to one or another hunting association.

I apologize again for this intruding into yout life knowing that you have enough worries without taking one from these wild spots.

With my sincere wishes and hoping you may be able to help me in this matter, I remain,

John Kup, P.O. Toutes Aides,
Manitoba, Canada

POSTING SIGNS

Dear Editor: Could you advise where I might obtain the legal size "No Trespassing" signs at a nominal cost? 15¢ each for signs seems pretty high when one has to post 128 acres.

M. C. Baker, Claryville

● *Probably your local newspaper does such job printing. If not, they would advise you.—Editor*

PUNCHED EAR

Gentlemen: This ear was cut from a full grown red fox which had been hit by a car on the East Line Road about one quarter mile south of intersection with Route 67, at East Line.

The peculiar punching in the ear made me think you people might be interested. Is it a conservation marking, or some private mark?

Edwin C. Howe, Ballston Lake

● *The ear has been punched all right, but not in connection with any project conducted by this Department. Perhaps one of our readers can tell us what this is all about.—Editor*

LETTER OF INQUIRY

Dear Editor: We have procured fishing rights on a lake here and would like to have your help with a method of increasing the plant life in the lake so as to produce more insect life for trout food. The lake is deficient in plant life as it is now, and we would like your suggestion as how to remedy that fact.

It is an artificial lake and the land very peaty. Please let us have your expert opinion because we hear that you had an article on the subject in *The New York State Conservationist* for August-September 1950.

J. R. Jarrett, Secretary,
Prysor Angling Assoc.,
N. Wales, Great Britain

● *This gives us an opportunity to point out how we handle correspondence: Anything of a technical nature addressed to us we refer to competent authorities in the particular field, with the request that they answer the writer direct. In this case, the letter was referred to C. W. Greene, Senior Aquatic Biologist, who answered Mr. Jarrett with copies of our publications and a letter too long and too detailed to print here.—Editor*

TOWERS ON THE MOVE

Dear Sir: What's the idea? Between 1925 and 1930 I did quite a bit of scouting throughout the Copake area. I knew the country like a book. One of the attractions was the fire tower, which I visited many times.

Recently I promised Assistant Scoutmaster Price, Bethpage Troop, a trip to Copake for three of his boys. Scout Brady set the alarm for 4:30 A.M.; a quick repast and we were on our way up the mountain towards the fire tower. Some time later, having reached the top, we discovered to my amazement—you guessed right—No tower. We did see it though—two mountains away. The boys were grinning like Cheshire cats, their thoughts an open book.

Didn't some of your boys shuffle those mountains around in a poker game one dark gloomy night? The next meeting of the Bethpage Troop is creeping up fast; was there a tower on the back range, or am I a nincompoop?

Edward J. Gaynor, Bethpage

● *The tower on Aylander Mountain was moved in 1932 to Mt. Washburn. Sorry, but we do this kind of thing from time to time.—Editor*

ILLEGAL KILLING

Dear Sirs: Could *The Conservationist* lead an attempt to bring the illegal killing of deer out into the open by conducting a suggestion box or poll of what might be done to deal with this situation? Once in a while I hear rumors in this area of people jacking deer on sort of a wholesale scale and selling the meat to a type of black market in Elmira and perhaps Ithaca, and maybe to New York City people. I'm almost sure that the true sportsmen of New York State could chip in some suggestions that would lead to a good effective way of dealing with this.

Robert N. Clauson, Odessa

● *We will certainly co-operate, and we're waiting for the suggestions.—Editor*

FOOD FOR THOUGHT

Dear Sir: In your Letters to the Editor section of the December-January 1950-51 *Conservationist*, I note a letter by J. M. Curran regarding the edibility of hedgehog liver and mentioning an article by Mr. Seagears on the porcupine as food.

I have been eating hedgehog and woodchuck for some time. I first marinate them (after cutting into sections) in vinegar, salt, pepper and water solution, then parboil in soda and water solution for 10 minutes, drain, and then cook in pressure cooker with salt, pepper, onion, bayleaf, 'till meat falls off bone. Then I put it into my regular spaghetti sauce. Really fine; also excellent curried.

Emmet C. Morton Sr., Ticonderoga

AUSABLE LYNX

Dear Editor: Regarding the letter of Mr. Orlando Gezzi of Newcomb (page 39, Aug.-Sept. '52) concerning the "lynx" that attacked a man in Ausable Forks in 1941:

In the autumn of 1941 the late Burton Smith of Ausable Forks, while checking his trapline for foxes, was scratched in two places on his back by a bay lynx (bobcat), while he was standing under a tree. The animal had apparently climbed the tree after breaking the wire to one of the traps, with the trap attached to one of its legs. The cat, at the moment cornered, leaped toward Mr. Smith and hit him on the back, whereupon Mr. Smith, after regaining his composure, disposed of the cat.

Reginald A. Wolfe, G. P., Lake Placid

WHO DUNNIT?

Gentlemen: While I was away in Europe last year some truck, carrying bass, came to my place of business on the Western Turnpike at Guilderland with bass for me. Being directed to my residence at Selkirk they asked the tenant there, "Where do we put the fish?"

The tenant was much surprised, as he knew of no fish coming and told them it couldn't be possible the bass were for here, inasmuch as the pond on the property had been recently stocked with rainbow trout, and the mixture was unthinkable. He didn't want to receive the bass.

Apparently there was no further time for palavering, for the fish had been enroute for a long time already and had to be liberated—somewhere. Hence the driver poured 50 (so I heard on my return months later) bass in with my trout. What a kettle of fish this is going to be I wouldn't know, but I hope the 10" trout consume the bass.

How this delivery was made I'd have no idea. After reading your complete article on the "Posting Law" in the current issue of *The Conservationist* I wish herewith to go on record that this misdirected delivery of 50 basslets by some indulgent agency is not to be in the future construed as my having accepted sacred conservation fish (to the detriment of my privately-purchased trout) and thereby throw my pond open to public fishing.

It does beat everything how fish turn up—unexpected like!

John Hall Blackburn, Selkirk

● *It sure does, but we are happy to report that the Conservation Department had nothing to do with this. They must have been Federal bass.—Editor*

PORCUPINES

Dear Editor: How does the State of New York feel about the killing of porcupines? They are quite a problem to those with dogs who hunt 'coons.

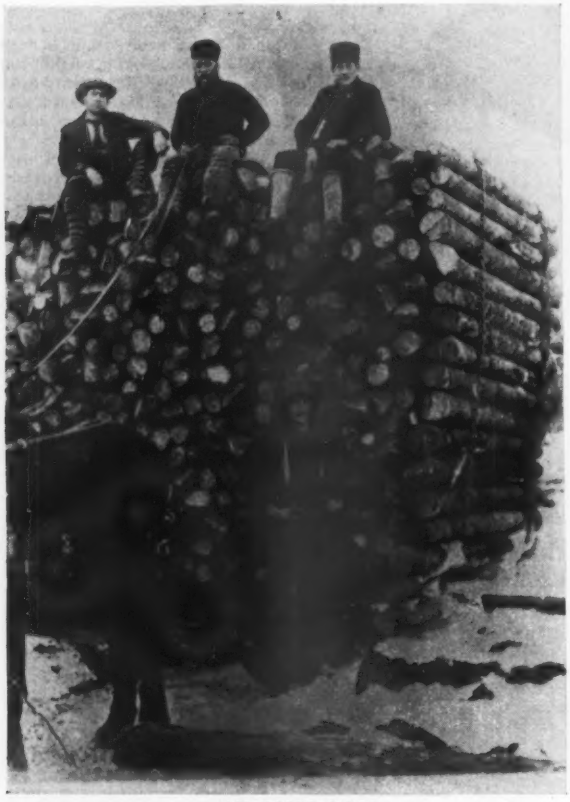
Elmer Young, Wellsburg

● *Quite a problem for others, too. Therefore, the Conservation Law of New York does not protect them at any time of year.—Editor*

PROBLEM CHILDREN

Gentlemen: My compliments on Clayt Seagears' article on Problem Children. Having been born and raised in the woods country of Northern Michigan, I know the danger of supposedly tame deer or bear. I was mad when I read the *LIFE* article—it reminded me of the stupidity of a deer hunter back home who threw a khaki blanket over his Ford radiator to keep it warm, then later put three rifle slugs through it. The ten-mile walk home after dark was suitable penance.

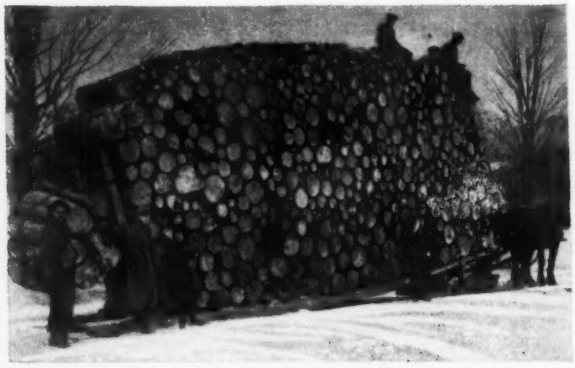
Joseph E. Van Riper, Maine, (N.Y.)



AU SABLE LOGS

Dear Sir: We were interested in the load of wood shown on page 28 of your April-May issue, and enclose herewith a picture of an even larger load. This was drawn from the Orlando Beede job on Johns Brook, at the foot of Mt. Marcy, 6¼ miles to Keene Valley. Most of the draw was downhill, but the last ½ mile on the level. It was unloaded at the mouth of Johns Brook.

There is another minor correction which we would like to make. For some reason, anyone connected with any department of the State refers to Au Sable Forks as "Ausable Forks." "Au Sable" is correctly two words. It seems strange that whenever the Au Sable River in Michigan is mentioned, it is always spelled correctly, but no one seems to like to be correct in New York State. It was named by Champlain and means "sandy"—a very appropriate name to anyone who has seen the sand beaches at the mouth of the river, and the sand banks all along its course.



Another thing—in a recent issue you talk about charcoal burning, stating that the J. & J. Rogers Company devastated a thousand acres a year. While it is nothing to be proud of, the fact is that it was between 6 and 7,000 acres a year, as we were the largest users of charcoal in the North County, and probably in the whole State, 75 years ago. We are all thankful that era has passed.

James Rogers, II, Vice President,
J. & J. Rogers Company, Au Sable Forks

Dear Editor: Since sending you the picture on October 23, I have been able to obtain more information. The people involved are Will Green, the driver, and Harley Luck, son-in-law of Orlando Beede, is also in the picture. Orlando is standing by himself alongside the load.

This was drawn in January of 1912, and of the distance drawn, three miles was on "hayed" hills. An interesting sidelight is that the weight of the load turned the snow on the hay into ice, so that the load following could not be controlled, causing a wreck which nearly killed the driver.

There is some question as to whether the driver was actually Will Green or John Bruce. John Bruce himself is not sure, since they took turns driving.

Enclosed also is a picture of another load which contained 400 logs, 13 ft. long, a total of 16½ cords. This was drawn eight miles from what was then known as "Klondike," near Mt. Porter, to the Au Sable River at South Meadows on February 24, 1903. The job was operated by Orlando Beede. The driver is Dolph Whitney and the boy standing on the ground is Will Otis. The other two we cannot identify.

We question the figure of 16½ cords on the load drawn from Klondike. We do know the logs were 13 ft. long and the bunks on the sleigh were 12 feet wide, but the actual height is unknown. It would look to us as though the load carried was around 12½ cords.

James Rogers

STARK!

Gentlemen: I had two weeks of woodchuck shooting this year in September and all I got the first week was one scrawny 'chuck. So one day in the second week I decided to take a "sun bath" in the beautiful weather.

I sat behind a stone wall, with my .22, stripped to my birthday suit. And believe me, sitting there naked, I got three 'chucks in less than an hour. Each one looked at me, turned, faced the wind, satisfied, started to feed. Naturally I hadn't moved a muscle and that helped. But the last two I got while I was standing up in the open. And here's the point—the three 'chucks all were staring at me as if I never was there, and the longest shot of the three was no more than fifteen yards.

Maybe it pays to hunt like that all the time. I don't know—you figure that one out.

Mike Buono, Brooklyn

● *The only trouble is, where do you put your hunting license?—Editor*

ADIRONDACK MAP

Dear Sirs: As you know, the Conservation Department publishes an Adirondack Map in four sections showing lands owned by the State. Since my own interests center on Section 2 of this map, I find my supply of this particular section depleted.

It occurred to me that people living in the various sections of the Adirondacks might center their interests in any of the other three sections. I have on hand several copies in good condition of Sections 1, 3 and 4. If anyone desires to exchange copies of Section 2 for any of these Sections 1, 3 or 4, they could contact me.

John J. Duquette, 2 Main St., Saranac Lake

• *Our supply of this map (which normally can be obtained from The Department for $3.00) is exhausted, and it will be some time before a revised and up-to-date edition will be available, although we are at work on it.—Editor*

QUICK WORK

Gentlemen: Ever since Mrs. DeWitt and I came home from our vacation out in New York State I have intended to write you folks relative to an incident which occurred while we were up near Pottersville on the river road.

One afternoon we were advised by some lumbermen who were up in the woods back of the house where we were staying that they smelt smoke and they believed a fire was burning up on the hill above them. I immediately drove over to a neighbor who had a phone and phoned the fire warden. Within I would say twenty minutes he was on the road going up in the woods to the fire.

I was thrilled by such service and feel that a warden rendering such service should be rewarded in some way. The fire was put out after some time.

Paul DeWitt, Gary, Indiana

NO DICE

Dear Sir: I would like to know if I can use my gun (a 410 & .22 over-and-under) in Westchester County if I insert a wooden dowl in the .22 barrel.

Josef Hirsch, Bronx

• *Since the Conservation Law specifically prohibits the use of rifles in certain counties, the combination rifle and shotgun firearm would be illegal in such counties unless: the firing pin were removed from the breech of the rifle part of the gun, thus mechanically altering the weapon so that it could not function as a rifle at the time of its use in such counties.—Harold Canepi, Asst. Supt. of Law Enforcement.*

HELP PLEASE

Dear Editor: Could you advise us of a lake in New York that means "You fish on your side, I'll fish on my side, and nobody fishes in the middle." The only hint we have is that several syllables are repeated, and that it is something like "chuets."

We hate to burden you with this question, but we don't know the answer and don't even know where to start looking. A reader from St. Louis wrote in about it.

Arthur P. Hutt, Assoc. Editor,
The Fisherman, Oxford, Ohio

● *We hope another reader will write in about it, because we don't have the answer.—Editor*

POSTING

Dear Editor: For 15 years free hunting and trespassing went on about my 100-acre farm until the abuses by city slickers went to extremes. For example, they began breaking apart stone walls to route out a squirrel, shot at prize hickory trees and maples standing near the house. A large sign begs hunters not to park their cars in the driveway, but they don't seem to read any kind of English. Around Christmas time they come back to steal Christmas trees of Norway Spruce by cutting the tops of choice trees.

Now I sadly have to post every foot of the road, and the good hunters wonder why.

Michael Michnya, Brooklyn

TYING FLIES

Dear Sir: I am interested in tying trout flies, etc., commercially and would like to obtain a license. Any help as to where and how to apply for same would be greatly appreciated.

Bennie Lipka, Homer

● *No license required.—Editor*

THE NORTHERN CATSKILLS

Dear Editor: My son is a subscriber to *The Conservationist*. When the June-July issue came he said, "Mother I think you will be interested in this article—"*Land of the Northern Catskills.*"

Why should I be interested? For a very special reason: I was born 69 years ago on a farm at North Settlement less than five miles from the summit of Mount Pisgah. Indeed I was interested. I have read and re-read the article and with my pencil have traveled over every inch of that splendid map. It's been like a trip back home.

My father, Franklin E. Frayer, drove a team of fine horses hitched to a "surrey with the fringe on top" and often we would drive to points of interest in the Catskills. Mount Pisgah (being so very near our home) was where company from a distance was always taken, providing weather and atmospheric conditions were favorable for the view we wished them to see.

I well remember the "winding road" of which the author writes. I have walked it and on hot days would have to stop at each "thank you, ma'am" to rest a bit before going on. No view in any part of the U.S.A. has ever given me the thrill that the one from Mount Pisgah gave when I was a child.

The picture of the observatory (reprinted here) I have not seen for many years and it brings back memories of a lovely summer day. It was one of those times when company had come to our home and a trip was made to Pisgah. It was a beautifully clear day and on arriving we found pictures were being taken. Believe it or not, six of those on the balcony I can identify. I am the eleven-year-old girl standing besides Mrs. Doolittle and the telescope. (That telescope had a great fascination for me—ten cents a look.) In the picture Mrs. Doolittle stands at left of the telescope, I am the girl next to her who is leaning on the rail, the third person is Oliver Atkins of Chesterville, the fourth person is his mother, Elva Atkins, the two men to her left are her husband, William, and my father. The rest of our party are there but I am unable to identify them.

I should like to thank Mr. Arthur C. Mack for so fine a word picture of the Land of the Northern Catskills.

Mrs. W. Scott Tompkins, Syracuse

LOG SCALING

Dear Editor: Prof. Lucian P. Plumley of the College (College of Forestry, Syracuse) has called my attention to the item on a *Single Log Rule* on page 32 of the October-November issue of *The Conservationist*.

Until the State Forest Practice Board acts on District 1's request (for a single log rule), you may wish to call attention of your readers to the enclosed leaflet on Log Scaling, by Prof. Plumley. The leaflet will help the forest landowners that the item refers to as being "at a disadvantage in selling timber because of lack of knowledge of timber and log measurement."

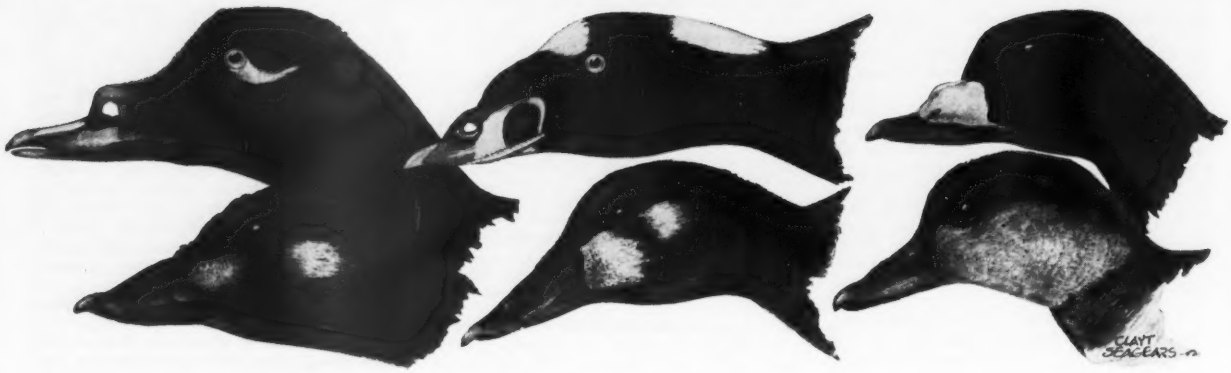
The leaflet discusses five log rules in common use, explains log measurement by these rules, and gives equivalent tables for four of the rules. Also discussed are how to allow for trim, log defects which must be considered in scaling, methods of deducting for defects, and a formula for computing board foot content of sawed lumber.

We will appreciate it if you will inform your readers that the leaflet may be obtained free from the Department of Forest Extension, State University College of Forestry, Syracuse 10, N. Y.

Edward H. Roche, Publications Asst.,
Syracuse University

CREDITS

First cover, James W. Fosburgh; second cover, Greenleaf Chase; pages 4, 5, 6, George H. Lesser; 6, 7, Dr. R. L. Rohdenburg; 9, 25, Fred Everett; 10, 11, Dave Cook, James Kennedy; 14, John A. Ruskowski; 16, Fred Streever; 17, 19, Ed Maunton; 20, 21, 22, Nick Drahos; 23, Joseph Dell; 26, P. W. Fosburgh; 30, Arthur J. Tefft; 31, Bryan Burgin; 32, Ralph M. Aiello; 33, F. Sands Brunner; 34, Earl McGuirk; 35, Seneca R. Stoddard, Fred Chambers.



WHITE-WING SCOTER. MALE AT TOP, FEMALE OR YOUNG BELOW

SURF SCOTER. NOTE THE FEATHERING AT THE BASE OF THE BILL

AMERICAN SCOTER. THE HEN HAS A WIDE CHEEK PATCH

The Sea Ducks

WAVERING in smoky skeins low over the bleak storm scud of the Atlantic move thousand upon thousand of our most romantic birds—the sea ducks. These tough children of the shadowy fathoms are so little known that most kinds simply are called by one common name: coot. And this general confusion is not helped by the fact that the *real* coot is an entirely different bird whose pedigree hasn't been crossed by a duck since the dim ages when most everybody's genes were playing post office together.

These sea ducks deserve far greater recognition.

Take the little matter of the sea duck's gizzard. The granite-shelled oyster, as you may know, requires a special skill with a special knife to shuck (unless the frenzy of frustration dictates a smash hit with a hammer.) But the sea duck is quite blasé about this sort of thing. It delivers the oyster whole to its gizzard. Then this truly frightening mechanism merely contracts and crushes the oyster into little bitty pieces!

Phenomenal gastric juices dissolve the gizzard-crushed shell fragments. It is in the record that wherever sea ducks gather upon the land, the soil never is calcium deficient. Amazing, ain't it?

In New York we're visited by four kinds of sea ducks. They are the American eider and the three scoters: the white-winged, the surf and the American. In season, the scoters swarm off Long Island's coasts. They also appear (but far less frequently) on most of our larger inland waters. Never a common visitor, the eider rarely rides the seas south of Montauk. Its cousins, the king and the spectacled eiders show up only now and then.

The scoters are the ones normally referred to by hunters simply as coot. The old males of all three kinds are all or mostly jet black. But each makes up for this lack of color by a bill unique among all wild ducks in shape and hue. Notice the sketch above. The male white-winged and surf scoters have bills streaked and spotted with black, bone white, orange, yellow and "blood blister" red. The knob at the base of the American scoter's schnozzle looks like a lump of butter. The females and the young of both sexes look alike—very dark brownish gray.

But no matter the age or sex, all can be identified by the feathering at the base of the bill. The sketch above was made exactly natural size from freshly-taken specimens so that before reduction to fit this page it was 18½ inches wide. The white wing patches of the pair at the left are unmistakable, but any duck with feathers squaring off way down by the nose is a white-wing. The males of the middle pair of surf scoters, commonly known as skunkheads, have feathering squared off way back up the bill like surf rolling up the beach. That's how we remember 'em. The male American, called just plain coot or butternose, is our only all-black duck.

The pair of eiders originally also were sketched life size and the male's head was 5¾ inches in a horizontal line from the tip of the bill to the back of the dome. This is our largest duck—sometimes up to six pounds—but the white-wing scoter is only a pound or so behind.

The feathers of this big duck provide the very valuable eider down of commerce. Eiders readily respond to semi-domesticity and the Icelanders, for example, encourage them to nest in handy colonies. Ma eider surrounds her eggs with a felt-like mat of down plucked from her breast. This is gathered and the bird obliges with a second plucking. After that she gives up and uses leaves.

On the basis of two raids per nest, about 20 nests furnish a pound of down which, if our calculations are not too far off the beam, provides a 3′ x 5′ hunk of the world's lightest, most elastic and warmest insulation. No wonder these diving sleeping bags never bother to go much south of the winter ice packs.

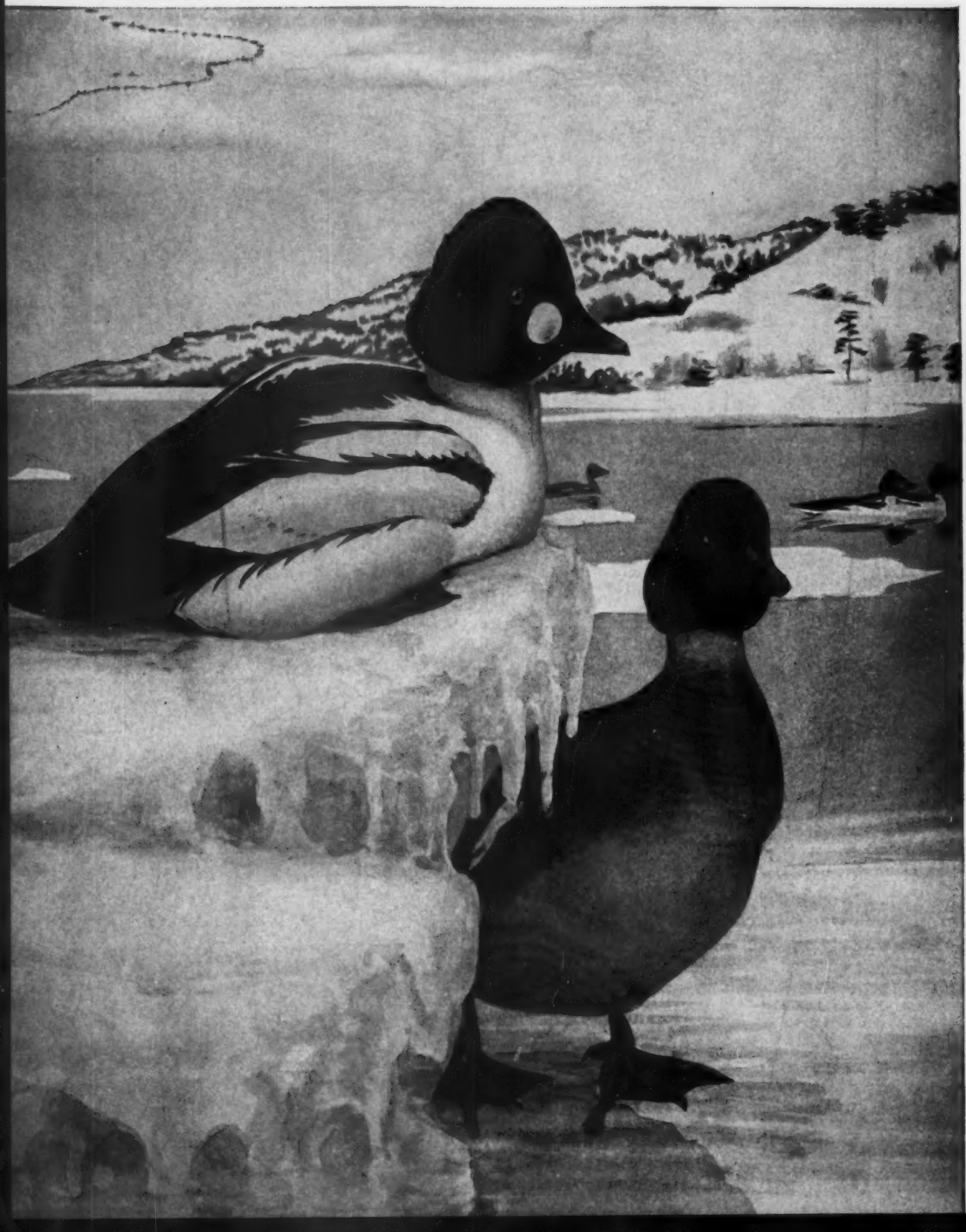
It is the erroneous but popular belief that the sea duck, usually ruined by parboiling, is much too rank to eat. For a really palatable receipt you might write a couple of coot stew epicures—Dewey or Austin Nickerson (not related) at Clark's Harbor, Nova Scotia.

Scoter shooting is not for sissies and it provides some of the most thrilling sport available on the Continent today. Collect a dozen small skiffs or dories, put a well-bundled gunner with a half-dozen boxes of shells in each, tow the whole kiboodle for a couple of miles straight out on the heaving Atlantic and let 'em anchor a long gunshot apart. Then drop back with the mother boat and wait for the dawn—and the on-coming lines of the birds. This kind of gunning never can deplete the supplies, even if you meet a sea duck half way which, Brother, is more than far enough. Snorkels for shooters aren't yet on the market.

—CLAYT SEAGEARS

DIVING SLEEPING BAGS

American Eider Ducks
(From old pair in winter plumage. Male upper)



Courtesy
N.Y.S. Museum

AMERICAN GOLDEN
Clangula clangula
americana (Bonaparte

Male

Female

1/3 nat. size